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Original Translations.

ARTICLE I. — *Clinical Lectures upon Mental and Nervous Diseases; Alcoholism, Alcohol and Absinthe, Absinthic Epilepsy.* By M. MAGNAN, Sainte Anne, Paris.

BEFORE beginning the purely clinical investigation of alcoholic intoxication, either acute or chronic, it is necessary to take into consideration the mode of action of the poison upon the economy. For a long time it has been thought, and it is even now generally believed, that spirituous liquors: wines, brandies, liqueurs, cider, beers, act upon the organism in consequence of the alcohol which they contain, and in direct proportion to the quantity of this substance. Disregarding foreign matters, such as the salts of lead, copper, strychnia, even, introduced fraudulently into these beverages, it is necessary to know the action which pertains to each of the substances entering into the regular composition of drinks.

I shall now proceed to give you the exact details concerning one of the most commonly used spirituous liquors. I refer to Absinthe. Different processes are employed in the fabrication of these products. After having macerated, during a greater or less length of time, different substances in alcohol, the mass may

be distilled, and the essential portion of the liquid thus obtained; but, at present, the greater number of the manufacturers prepare the liquor cold, without distillation, they satisfy themselves with the use of certain essences which they mix, in greater or less quantity, with the alcohol. I have procured the formulæ of different manufacturers, and have been able to satisfy myself of the nearly uniform use of the same substance by nearly all of them. The differences concern more especially the quantities and qualities of the alcoholic excipient. The substances which, in addition to alcohol and absinth, enter intothe composition of the absinth liquor are star anise, anise, angelica, *calamus aromaticus*, origanum, sometimes balm, fennel and mint. These three last are added only by some manufacturers.

Now, gentlemen, let us examine what becomes of alcohol in the organism, and what are its effects. Alcohol, according to the theory of Liebig, considered as a respiratory, undergoes in the economy metamorphoses of successive oxydations which terminate, finally, in the production of water and carbonic acid.

MM. Bouchardat and Sandras,* by endorsing this doctrine, have rendered it classic; likewise, in 1860, when the remarkable work of MM. Lallemand, Perrin and Duroy† appeared, it was asserted, generally, that alcohol was an alimentary body, and was assimilated.

These authors, you know, combat, directly, the classic opinion, rob alcohol of its elementary properties, but they assign to it a direct and primary action upon the organism, and more particularly upon the nervous centres. They admit that alcohol penetrates into the economy, remains there in its natural state, and is eliminated without undergoing the least modification: that it escapes, as it enters, in the state of alcohol.

In the face of two doctrines so opposite, both based upon investigations carefully conducted, it becomes necessary to examine upon which side the truth is to be found, or even to determine the part to be assigned to each one of these opinions; the more so, as accurate ideas about alcohol will be of great service

* *Annales de Chimie et de Physique.* 1847.

† Lallemand, Perrin et Duroy. 1860. *Du rôle de l'alcool et des anesthetiques dans l'organisme.*

in the establishment of therapeutical indications. Permit me, then, to delay one moment for their discussion.

It may be said that, in favor of the old theory, there is no direct demonstration. This phase of the subject, corresponding to what is admitted about the chemical phenomena of digestion, it seems to be so likewise of them. Efforts have been made to detect in the economy the products of the different transformations assumed by alcohol under the influence of successive oxidations; but the results have not been very conclusive. MM. Bouchardat and Sandras, with great difficulty, succeeded in detecting the existence of one of the intermediate products, acetic acid, in the blood of alcoholized animals; they recognized it by its odor, and by a very slight acid reaction.

On the other hand, Duckel, of Prague, asserted that aldehyde could be detected in the blood; that aldehyde was rapidly transformed, and would give origin to the reproduction of acetates and oxydates; that thus, by a series of duplications, the formation of water and carbonic acid was reached. But these isolated investigations have not, to my knowledge, received the support of recent analysis. Moreover, as the quantities of alcohol eliminated, invariably differ widely from the doses administered, the partizans of the theory of Liebeg are strengthened by the well-known fact; we shall see what is to be concluded from it.

Let us examine, first, the evidence advanced by MM. Lallemand, Perrin and Duroy, in support of their theory. These authors demonstrated, on the one hand, the presence of alcohol, unchanged, in the economy; on the other, its elimination by the different excretory channels, the kidneys, the lungs, the skin.

MM. Bouchardat and Sandras, who had likewise determined the presence of alcohol in the products of the pulmonary exhalation, have detected none of it in the urine; but the majority of experimenters have observed it there. M. Baudot.* in particular, one of the most zealous defenders of the old theory, declares, in one of his analyses, that a man having swallowed three hundred and five cubic centimetres of alcohol, evacuated ten cubic centimetres of it in two kilogrammes of urine passed in about twenty hours. He rests, indeed, upon this scanty elimination by the urine, in

* *Union Médicale*, 1863, 1864. De l'alcool, de sa destruction dans l'organisme.

order to arrive at the conclusion that a large portion of the alcohol must necessarily be destroyed. It has been said, weigh first, weigh afterwards, and then decide. This argument of the scales, gentlemen, is more specious than solid. Doubtless, it is possible to determine, with sufficient accuracy, the quantity of alcohol eliminated by the urine, but the capacity, and especially the duration, of the elimination by the pulmonary and cutaneous channels is entirely ignored.

You see before you a dog plunged, at this moment, into a state of alcoholic intoxication; approach his nostrils, you will receive, at each expiration, puffs of alcoholic vapor.

This elimination will continue with the same degree of intensity during three or four hours; after which it diminishes; but frequently, it is possible, after the expiration of ten or twelve hours from the beginning of the experiment, to determine, by its odor, the presence of alcohol in the expired air; and this, certainly, is not the latest period of the elimination, since alcohol can be detected, we have ascertained it personally, in the organs and in the blood of persons dead three or four days after their last debauch.

At first more active, the elimination diminishes gradually, and terminates by becoming nearly insensible, but it does not the less continue, although its intensity can scarcely be appreciated.

To these direct proofs of the persistence of alcohol in the economy, we will add indirect proofs quite as important. If the alcohol were transformed, the successive oxydations could not be accomplished without inducing modifications of calorification and in the formation of certain products; in other words, we ought to observe an elevation of temperature, and augmentation of carbonic acid, an augmentation likewise of urea; chemical observation and experiment prove directly the contrary.

MM. Lallemand, Perrin and Duroy indicate a diminution of temperature of scarcely a degree, in animals submitted to the action of alcoholic liquors. Edward Smith also mentions a cooling of the body, under the same circumstances. But already — in 1848 — MM. Dumeril and Dumarquay had pointed out a considerable reduction of the temperature of animals submitted to the action of alcohol; and, in one of their experiments, they had succeeded in detecting, at the end of three hours, a difference

of 9.°6, in a dog to which they had administered 125 grammes (about 4 ounces) of alcohol.

This cooling is more marked than that resulting from ether or chloroform.

We have personally noted, in our experiments, a depression of 3.°5 in animals plunged into alcoholic intoxication of medium intensity, and insufficient to produce death.

Clinical observation, likewise, supplies us with examples, no less remarkable, of diminution of the temperature of the body under the influence of alcoholic drinks. I owe to the courtesy of M. Duquet, chief of clinic to the faculty, the following report of a case of alcoholic intoxication, in which the depression was carried to the utmost limits. The subject was a female, aged thirty-years, of a vigorous constitution, who, on the third of March, 1869, at 10 A.M., was brought to la Pitié, St. Charles ward, No. 14, under the charge of M. Peter. This woman, after having, on the previous evening, indulged in copious libations (potations?), was lost in the country, in the neighborhood of Ivry. She had passed the night under a freezing, drenching rain; at about three o'clock in the morning, had been seen wandering, by some farm laborers. At six o'clock, she had been found, lying cold and senseless, in a ditch.

On arriving at the hospital, there was complete coma, and considerable superficial coldness; almost complete abolition of sensibility; the arms and legs were agitated by slight convulsive movements, feeble in character, as it were twistings, or rather a sort of crawling in all directions; the force expressed in these movements was considerable; the pulse was full and regular, but infrequent. *The temperature, tested carefully at the moment of inspection, indicated twenty-six degrees* (Centigrade, 55.12° Fahrenheit), *in the axilla and vagina.*

The patient placed in bed, was warmed by means of hot bricks; and stimulating drinks were administered. Gradually, the convulsive phenomena ceased, the temperature of the body was insensibly elevated, and the patient recovered consciousness at half-past four P.M.

From this moment, all the functions were reëstablished rapidly, and her return to health was affected sufficiently to admit of her discharge from the hospital on the following day.

M. Hirne, clinical statistician, registered the temperature at different intervals, from the first examination, which gave 26°. The scale below exhibits the gradual elevation:

Hour.	*Vaginal Temperature.*	*Axillary Temperature.*
11.30	27.°9	27.°9
12.30	28.°7	28.°6
12.45	30.°4	30.°
1.15	30.°9	31.°1
3.15	34.°4	34.°3
4.20		36.°3

While assigning even a very important part to the action of cold, it is impossible to avoid recognizing the influence of spirituous liquors in this diminution of nearly 11 degrees.

You perceive the demonstration is complete, as far as regards temperature; on the other hand, the investigations of Bocker* of Vierordt, of Lehman, of MM. Perrin show that the quantity of carbonic acid is less, and that the diminution is in direct ratio to the dose of alcohol imbibed. Finally, the urine does not contain an increased quantity of urea. Certain observers, Bokes, especially, notice even a slight diminution.

You perceive, gentlemen, abundant evidence in favor of the new theory, and it would be a strange error to consider alcohol eliminated as a complete superfluity, as a simple excess of which the economy should be freed. We do not believe, however, that it is necessary to repeat, altogether, the idea of the possible transformation of a portion of the alcohol. The disagreeable acescence which accompanies drunkenness, should be alone sufficient to indicate changes occurring, even before its absorption in the circulation. To sum up, the principal fact, that which occupies the most prominent position, is the passage of alcohol through the organism, and its escape in a natural state through the different excretory channels; hence its invariably uniform action, direct and immediate, upon the different organs, and more especially upon the nervous centres.

A secondary, accessory fact is the transformation of a small portion only of the digested alcohol.

Knowing, now, the manner in which alcohol acts, let us

*Archives General de Médècine. 1849.

investigate the immediate phenomena to which it gives rise, in doses slightly increased.

Under its influence, muscular action, at the end of some minutes, escapes from the control of the will; the animal staggers; the paws overlap, especially the hinder ones, one or the other gives way, and the body falls upon its side; at first, the animal is able to raise himself, and resumes his equilibrium, which he soon loses again in the same manner; next, his two hind paws bend, and are drawn up under the animal, who, raised upon his fore-paws, endeavors to crawl, dragging along with difficulty his posterior extremities.

Gradually, the paralysis overtakes the posterior portions of the body; the animal presents a condition of complete relaxation, and is soon plunged into a comatose sleep; if awakened, he relapses like an inert mass, the limbs pendulous, and the head likewise, all elasticity being abolished; next alvine evacuations and vomitings occur, and the subject, completely intoxicated, remains prostrate in the midst of his evacuations.

The thermometer placed in the rectum indicates a considerable reduction of temperature; the breath exhales a decided alcoholic odor.

The urine of animals, submitted temporarily to the action of alcohol, presents no traces of albumen. These phenomena persist during variable periods, which may be extended to three or four hours, and even more; after which the return to health proceeds slowly, when the animal, on awakening, resumes, as soon as he can, his habitual movements.

Under some circumstances, all is not over; pulmonary or cerebral complications ensue, which may become rapidly fatal.

It has been sought to determine if the different varieties of alcohol had different effects. Analogous phenomena have been determined for all, but varying in intensity according to the quality of the alcohol. Thus M. Cros, in his thesis, shows, by experiments upon rabbits, pigeons, and upon men, that amylic alcohol, in equal doses, develops much more decided phenomena than vinous alcohol; but the general character of the symptoms remains nearly the same. Its topical effect upon the digestive canal has been observed to be irritative and more energetic.

A very important fact, gentlemen, to which I desire to direct

your attention in an especial manner, is, that in a considerable number of experiments made with alcohol, there has been no recorded observation of the appearance of epileptic or epileptiform convulsions. You will hence perceive the necessity of seeking elsewhere than in the immediate effect of alcohol, the cause of epilepsy in acute alcoholism.

M. Magnan presented a series of different animals submitted to alcoholic intoxication in various degrees. These animals evinced the phenomena which have just been discussed. In addition, there was remarked, in the case of a guinea-pig, besides this paraplegia, slight tremor of the paws; this tremor which was not perceptible in every case, ceased generally when the animal was in a comatose sleep.

We now perceive, continued M. Magnan, the anatomical modifications to which acute alcoholic intoxication gives origin.

For a long time, hitherto, the presence of alcohol has been detected in the nervous centres. Ogston discovered it in the brain of a drunken woman; M. Jardien and others have observed the alcoholic odor exhaled by the brain of persons who have died in a drunken condition. But the investigations of M. Lallemand, Perrin and Duroy have contributed especially to establish a clear demonstration of the presence of alcohol in the different organs, and in the blood. For our own part, in 1864, we had, at the Bicêtre, the opportunity to repeat these analyses, with the coöperation of M. Belin, pharmaceutical interne. He determined in man, and also in animals submitted to experiment, the presence of alcohol in the brain and spinal cord, in the liver, in the blood, and likewise, but in very small quantity, in the lungs and in the kidneys.

From the analyses made at St. Anne, with M. Chatenier, pharmaceutical interne, we have arrived at the same result. We have obtained from different organs, by distillation, products having the physical and chemical properties of alcohol. With the test-liquor,

Bichromate of Potass - - - - - - - - -	1
Sulphuric acid - - - - - - - - - -	30

A magnificent emerald green color is obtained, chromic acid gives a black tint; ammoniac a blackish-brown deposit. The

distilled liquor exhaled an alcoholic odor, and the vapors took fire from the light of a candle, producing bluish flames, like ordinary alcohol.

Spirituous liquors are not distributed equally and uniformly throughout the organism; certain organs appear to have a particular affinity for these substances, and store them up in greater quantity. It is well to observe, however, that the channel of absorption has a definite influence upon the more particular accumulation of alcohol in certain organs. Thus, when absorption was effected through the pulmonary mucous surface, or through the veins, the poison is found in greater quantity in the nervous centres. When, on the contrary, the liquids are introduced into the stomach, the portal vein carries toward the liver the substances contained in the gastric cavity, and the liver then becomes richest in alcohol. The blood falls into the third rank; then the kidneys, and the lungs.

The cerebro-spinal membranes are injected, frequently suggillations are perceived, little sanguineous infiltrations into the thickness of the pia-meter; sometimes even a little blood spread out in a layer upon the surface of the arachnoid.

These meningial hæmorrhages have appeared to me the more common in men than in animals. The brain and the spinal cord are generally injected; the gray substance, whether at the periphery or the centre, assumes a rosy color, more or less deep, and, under some circumstances, a very remarkable tint, like the meat of ham.

The mucous membrane of the stomach presents, almost always, in animals, a vivid injection, sometimes little ecchymotic patches, and sometimes hæmorrhages, either under the membrane, within its thickness, or upon the surface; and then small ulcerations may be discovered, covered with blackish clots.

The intestines present a variable degree of injection, which is arrested, generally, in the upper portion of the small intestine. It is not rare to find in the lungs reddish patches, congested, sometimes also with apopleptic points; but these lesions are always disseminated.

The liver and the kidneys are injected, but they are very rarely the seat of hæmorrhages.

§ II.—When an animal is submitted to the prolonged action of alcohol, the phenomena which we have just indicated will be seen to supervene after each administration of the poison, and, in addition, certain symptoms, which are not met with in simple drunkenness.

A vigorous dog, two and a half years old, weighing 16 kilogrammes, took, during about two months, a daily dose of 60 grammes of alcohol. Each time, eight to fifteen minutes after the injection of the toxic liquid, the animal staggered, falls collapsed, in a state of complete resolution, with relaxation of the sphincters; he fell into a comatose sleep, of which the duration from the commencement scarcely exceeded two or three hours. At the beginning of the poisoning process, immediately on awakening, the normal state returned quite rapidly; but from the second month, in proportion as the chronic intoxication progressed, the animal preserved always a slight hebetude.

A symptom especially worthy of arresting the attention, and which suggests a certain resemblance to *delirium tremens* in man, is the appearance of tremor, which, manifesting itself first in the paws, gradually becomes general, involving the muscles of the neck and of the trunk, in the last fortnight. This tremor, which was persistent during a greater portion of the day, did not entirely disappear during the comatose sleep. Every morning the stomach was found to be filled with mucus; the cleansing of the orifice of the gastric canula, permitted the escape therefrom of a stream of liquid, viscous and adhesive, analogous to the pituitary secretion of drunkards. Upon several occasions, during the course of these experiments, I increased the dose of alcohol to 70 and even to 75 grammes. This addition of from ten to fifteen grammes to the habitual dose sufficed to induce symptoms whose intensity was altogether disproportioned to this slight additional quantity.

A degree of saturation had been reached which could not be exceeded. In man, as is well known, the same condition exists.

Autopsy shows a thickening of the gastric tunics. The mucous surface, of a reddish-brown, is covered with a layer of thick tenacious, vitreous mucus, streaked with blood at intervals; upon cleansing this surface, by means of a stream of water, small ulcerations were seen below, with irregular borders, and in some places,

cicatrized portions in the form of irregular, grayish patches. In the thickness of the mucous membrane, sanguineous infiltrations were observed, some spread out in sheets, others collected in little foci. The liver presented a general yellowish tint, studded with more deeply colored points in the centre of the lobules. The kidneys had already assumed incipient fatty degeneration, especially in the cortical layer, and in the columns of Bertini. The cavities of the heart, especially those of the right side, and the venæ cavæ were distended, and filled with blackish clots.

The lungs exhibited some sub-pleural ecchymoses. The membranes, slightly œdematous, presented a rosy color at the level of the chiasma. The cerebral substance was a little injected. Chemical analysis revealed the presence of alcohol in the organs, and the microscopic examination permitted a more thorough investigation of the fatty degeneration of the liver and of the kidneys. Although this dog had not lived a sufficiently long time to manifest the very advanced lesions of chronic alcoholism, nevertheless, what we discovered sufficed to give us an idea of those lesions which presented themselves in the animal, with characters analogous to those habitually encountered in man.

In an oral communication, M. Leidersdorf, of Vienna, informed me that Dr. Kremiansky, having fed young dogs with alcoholic soups, had succeeded, in the course of a few months, in producing in these animals cerebral pachymeningitis, a lesion which is well known to be not infrequent in chronic alcoholism.

Amputation by the Ecraseur.

M. BARDINET, of Limoges, in the *Bulletin Général Thérapeutique*, for June 15th, recommends the *Ecraseur* as a means of performing amputation of the limbs, and states that he has in this way removed the leg. In operating, he first cuts through the skin, and then divides the tissues, in separate portions, by the *Ecraseur*, from without inward. Lastly, the bone is sawn through. M. Chassaignac in a note to the editor of the *Bulletin*, says that, though he has used the *Ecraseur* successfully in two cases of amputation of the thigh, he does not consider this instrument suitable for amputations in general, inasmuch as it is not capable of ready application in all cases.—*N. Y. Med. Jour.*

Foreign Items.

On the 1st of September, during the discussion upon vaccination, which has occupied the attention of the Imperial Academy of Medicine (Paris) during a portion of every session, for several months past, M. Ricord made the following observations: "There are now under discussion two species, or rather two sources of vaccine, with but one and the same virus. The first, which we have from Jenner, is asserted to be degenerated. MM. Guérin, Bousquet, and Vernois have treated this question too thoroughly to permit its recall. I do not believe in the degeneration of vaccine; I attribute the differences observed to the soil, rather than to the grain. But another stigma is affixed to human vaccine. If, they say, it has not degenerated, it has become vitiated; it has become compromised by being united with another virus; in a word, they present to us vaccinal-syphilis. The mode of transmission of syphilis has been a long time denied and neglected by the Academy itself. I ask of M. Depaul, who has made an immense number of vaccinations, if he took all the minute precautions which would avail to prevent such an accident? Certainly not; he did not so occupy himself, he did not think of them; his reports do not contain a single word upon this subject, previous to what might be called the Italian Epidemic.

"To sum up, then, vaccinal-syphilis is very rare, excessively rare, very difficult to reproduce, even when the inoculation is performed with vaccine from subjects notoriously syphilitic.

"Moreover, at one time, nothing was talked of but vaccinal-syphilis; facts of this sort were multiplied infinitely; following these indications, it might have been supposed that vaccinal-syphilis would soon replace vaccine. This has been considerably exaggerated. A large number of observations have aggregated which presented no traces of syphilis. Moreover, M. Depaul himself has told you, when we begin to investigate a subject we take whatever we can, subsequently we reject a portion of these doubtful facts, which had previously been accepted.

"Like M. Guérin, I am astonished at one thing. I cannot

restrain my surprise at the great number of children cured without treatment, after having had this pseudo vaccinal-syphilis.

"We know, concerning infantile syphilis, however great its gravity, what extreme difficulties we experience in curing it by specific treatment carefully managed, and long continued. I know that it has been said, 'We must distinguish between congenital and inoculated infantile syphilis: the first is much more grave, because it seizes the infant before it has sufficient vigor to resist.' So they say; but is syphilis inoculated into infants benignant? Certainly not, as much as it might be. I can assert that it is severe, very severe, altogether as grave, at the least, as any other sort. It is said further that syphilis, inoculated, should be weaker in consequence of the inoculation; but when it is taken by contact at its habitual source, it is inoculated; we must not delude ourselves upon this point. An old author, Boerhave, I think, has expressed the contrary opinion to that which is at present held; according to him, syphilis would be much more severe, were it not acquired in the habitual way.

"Permit me to recall to you, that when I did not believe in the contagion of secondary lesions, when the effort was made to prove this against me and to combat my opinions, all the cases of syphilis produced by inoculation of secondary lesions were of the most severe character, nurses infected by their nurselings were lost women (femmes perdues); now the point of observation has been changed, and these same facts have become most benign. Let us, then, acknowledge the truth, that in children, as in adults, syphilis may be mild or severe, but that whether inoculated or not, it is always less easy to cure in young infants, because they offer less resistance. In my own mind, this is a well established conviction, based upon long practical experience.

"I do not admit the pretended benignity of infantile syphilis.

"M. Guérin, on his part, has, perhaps, exaggerated a little in the other direction. He has nearly reached the conclusion that the diagnosis of syphilis was very vague and uncertain. I know nothing, on the contrary, in medicine or surgery, more easy to diagnose than syphilis, in the vast majority of cases; primary phenomena, indurated chancre, then adenopathia and secondary and tertiary lesions more or less remote; when this picture is presented to the view, it is difficult to be deceived. I know very

well, that it may happen that we may be satisfied with insufficient evidence; here, even, in the Academy cases have been presented which were deceptive from too great precipitation. But we are rarely deceived, deliberately. Thus I myself have been forced to admit the reality of vaccinal-syphilis, in spite of all my repugnance. Facts have constrained me thereto. They have been presented to me with characteristics which did not admit of doubt, for I described them myself. I decided that I was deceived, and I acknowledged it. I know nothing more agreeable than to recognize an error which has been demonstrated by one's own rules. I therefore now admit the possible transmission of syphilis by vaccination. But I must say it, it is something which has thus far escaped me. I have not yet been able to discover in published observations, the first '*vaccino-siphiliphere*.'

"In those of the 2nd or 3rd hand, that is alone sufficient, for inoculation produces a chancre, which itself becomes a source of syphilis. But can the first, which was itself the subject of constitutional syphilis, develop in itself any syphilitic lesion at the vaccinated point? It is a curious fact, that upon those who are constitutionally syphilitic, all possible operations may be performed without any modification of their results by syphilis. For my own part I have never seen, in my long practice, that it exercised the least influence. I have removed tonsils covered with mucous tubercles, performed amputations, castrations, etc., without finding the cures retarded or the cicatrization less perfect than in non-syphilitic subjects. I have never seen a vaccinal pustule become chancrous.

"M. Depaul — It never becomes such.

"M. Ricord — I am happy to be, upon this point, of the same opinion as M. Depaul.

"It has been said, and it appears just at the first glance, is it necessary to know the source from which a disease is drawn, in order to recognize it? No, doubtless; and it happens to me every day to recognize the pox without knowing from whence it is derived. But is it, then, absolutely a matter of indifference to trace it to its source? By no means; frequently, it would be very interesting to study it. I should like very much to study the vaccinal pustule which supplies the virus contaminated by syphilis.

"Vaccinal-syphilis admitted, and I repeat it, I do admit it, what is its mechanism? What are its pathogenic conditions? Is there a union of the two species of virus, with a hybrid product? Certainly not. Are they then placed parallel? It is possible. There is one point upon which I insist; the question of the blood and its agency in the transmission of syphilis. I believe it impossible for the most adroit to avoid the blood in collecting vaccine upon his lancet. I have asked, from the Academy, the purest possible vaccine virus, with special reference to this point. I have submitted it to M. Robin; it contained numerous globules of blood.

"M. Depaul — It is always so under the microscope; blood globules are always detected in the purest vaccine.

"I am happy to be again confirmed in my opinion by the authority of M. Depaul. Thus when they picture for us pure vaccine in the vaccinal pustule, and syphilis in the sub-soil, if the expression may be permitted, they invoke theoretical subtleties based upon nothing at all, and which, moreover, possess the serious inconvenience of endangering the vaccinator, if syphilis should manifest itself in the vaccinated child. It may be believed that he has not taken the necessary precautions, or again that he has taken them all; that he has neglected to avoid blood; then that it was impossible to avoid it. It must be said, if syphilis can come from a vaccine pustule, it may be derived from the vaccine as well as from the blood.

"I now come to cow-pox. Its panegyric has been too recently pronounced by M. Depaul to admit of its repetition. M. Herard, moreover, has traced between it and the Jennerian virus, a relation which has shown with sufficient clearness their possession of equal qualities. Here, at least, there is no fear of syphilis, for the animal is exempt. I was one of a committee, which made every possible effort to inoculate syphilis into the cow, without success. This is certainly an advantage. But may not the cow-pox at some time have its contamination? Animals have diseases which are communicated to men.

"To conclude, vaccinal syphilis is rare. Neither human vaccine nor the cow-pox should be rejected. They should both be investigated, and at the same time propagated.

Hospital Reports.

ARTICLE I. — *Cook County Hospital.* Reported by CURTIS T. FENN, M.D.

THE following is a brief summary of reports for the month of September, 1869:

There were in the Medical Department, at the beginning of the month, 38; admitted during the month, 74; discharged cured, 36; discharged relieved, 5; sent to the County House, 2; absconded, 1; died, 16; remaining, 52.

In the Surgical Department at the beginning of the month, 33; admitted, 14; discharged cured, 20; discharged relieved, 1; discharged incurable, 1; died, 2; remaining, 23.

In the Gynæcological Department at the beginning of the month, 19; admitted, 17; discharged cured, 9; discharged relieved, 2; absconded, 1; died, 1; remaining, 23; births, 16.

In the Ophthalmic and Aural Department at the beginning of the month, 17; admitted, 5; discharged cured, 2; discharged relieved, 2; absconded, 1; remaining, 19.

Total at the beginning of the month, 107; admitted, 112; discharged cured, 67; discharged relieved, 10; discharged incurable, 1; absconded, 3; sent to County House, 2; died, 19; remaining, 117.

There were in the Gynæcological Department at the beginning of September, 1868, 13; admitted, 15; discharged cured, 3; at own request, 1; absconded, 1; died, 1; remaining, 23; births, 8.

An increase equal at least to that, has occurred in each of the other departments. Two new wards have been provided, lately, by alterations in the basement, the only extension possible at present. There is reason to believe that even with double the room now afforded, needy sufferers would soon be in excess of places to receive them.

Of course the labor of the attendants is increasing. The house physician and his two assistants, carry a great responsibility, with credit to all concerned, be it said. Registration, diet lists, prescriptions, surgical dressings, midwifery, *post mortems*, monthly reports, run up a startling aggregate of work each month. If the hospital did no more than complete the education of its internes,

it would fill a good mission. The breadth of experience, the coolness and efficiency acquired by contact day and night for a year and a half, with such an accumulation of humanity in mortal combat, is a proper finish to a medical education. The hospital imparts more than lectures, or books, or travel. The interne is taken into the closest intimacy with suffering and death. He comes face to face with what years of private practice will but slowly unfold. Experience, if waited for, generally arrives so late as to serve but a brief space, when other knowledge with which it ought to be joined, has faded from memory. Some things are gained by patient, slow, laborious plodding. But much that a medical man must ever hold as the highest and best attainment, is reached intuitively. There is a capacity which amounts to genius, in the majority of those who adopt the study of medicine. It seeks recognition in affinity for clinics and autopsies. This eagerness is not morbid curiosity. It is enthusiasm urging them to come eye to eye with their work. It is an exchange of civilities between nature and her votaries. With his five senses, under favoring circumstances, one will intuitively arrive at clearer perceptions of truth than wordy sketches or diagrams, or models, will ever convey. The student desires the presence of nature. This enthusiasm ought to be gratified early. In its track books become illuminated. Readiness to recognize facts: focusing of all the intelligence upon objects, is a proof of genius. Facts rob theories of undue proportions. The hospital, in a word, is a great teacher. Its grand object-lessons never become stale. The truths they utter flash upon the mind at once. Teachable souls are there admitted to the secret of the Almighty.

We are never surprised, therefore, that a large number of graduates annually seek the appointment of interne. It is to perfect a foundation for future study — acquaintance with actual, tangible facts, such as appeal to us in pallid faces and vacant cots.

The house physician is now required to keep a reference file for each ward. Every important case is entered upon a slip of paper; previous and current history noted, and this slip is filed. When removed, it is pasted in a scrap-book. This tax upon him is one of the most important in the way of discipline, and affords a valuable accession to the records of the hospital.

Cliniques are again in vogue: two Medical, two Surgical, one Ophthalmic, one Gynæcological or Dermatological each week.

Prof. Johnson conducts the Medical clinique at 1.30, and Prof. Powell the Surgical clinique at 2.30, Tuesdays and Fridays.

Dr. J. H. Hildreth holds a clinique at 1.30, and either Dr. H. W. Jones or Dr. C. G. Smith at 2.30 Saturdays.

A large body of students from the different Medical Colleges are in attendance. Medical practitioners from the city and country are always ready to attend. The fund received by the sale of tickets has been large, and is appropriated towards paying current expenses. The mission of the County Hospital is a noble one, not only in regard to its influence as an educational means, but also as an institution of public charity. We bespeak for it whatever will promote the convenience of its attending and resident physicians. A small sum taken from the income of tickets annually, and appropriated to the general good, might be used to materially lighten the burden of those who are called to serve.

Society Reports.

Article I.—*Intemperance as a Disease.*

[We are indebted to Dr. Parrish, of Media, Penn., for the following *Report of the Committee on Intemperance as a Disease*, read before the State Medical Society of Pennsylvania at its recent session.—Ed.]

Report.—The statement that there *is* a "medical aspect" to this subject, presupposes that intoxication, either from alcohol or opium, is, in some of its phases, a disease; and if this be true, it is an interesting inquiry how far this fact modifies the relation of the subject to morals and law.

In the very outset, we find ourselves confronted by recognized authorities in law and morals which, while they may not deny that intemperance is sometimes a disease, still deal with it exclusively as an offence against law and morality.

In this respect, it is an anomaly in our profession, because not only has it positive and well-defined symptoms by which even non-professional observers can distinguish it, but it is made a punishable offence against common decency and public order. Your committee therefore find it difficult to reconcile this peculiarity of the subject with the ordinary methods of professional

thought and inquiry as related to other diseases which have no such embarrassments.

There are, however, distinct forms and varieties of alcoholic excess, which are well defined, and which we propose briefly to notice. Of that class of men who take their wine, as Cowper did his tea, "to cheer, but not to inebriate," we shall not speak. These are technically known as moderate drinkers, and are not necessarily subjects, on that account, for medical observation and treatment.

There are, however, at least three other classes:

1. The occasional drinker, who sometimes, but seldom, crosses the boundaries of sobriety.

2. The periodical drinker, who, at intervals, throws the reins on the neck of appetite, abandons himself to his passion for excitants, and who may do so almost unconsciously, or with deliberate intent and purpose.

3. The habitual drinker, who indulges without deliberation or without sudden impulse, but because there is an appetite which has corrupted his constitution, and made him a victim to a habit which he can not of himself overcome.

The multitudes of persons who are addicted to these several forms of inebriation, and the terrible consequences of the disease upon the domestic and industrial interests of the world, render its discussion one of the most important which can claim our thought. It seems to your committee to be a medical and physiological question, which should be studied as any other medical question; and in whatever legislation may be required concerning it, that this fact should be recognized.

Causes.—Your committee are further of the opinion that there are constitutional tendencies inherent in mankind to seek artificial support. In vindication of this statement, we find that in every soil and climate there is some indigenous product from which man, whatever be the stage of his civilization, extracts an intoxicating ingredient. The rudest people of the globe, without any of the appliances of modern art or science, are not so rude and uncultivated, that they do not manufacture alcoholic liquors from the growth of their fields; and we know of no nation or people on the earth among whom intoxication is not a common vice. There is a demand for intoxicants, and there is a supply.

Accepting this fact of history, comparing it with the experience of our own time, and noting the evidences which are daily presented to us in the practice of our profession, we are convinced. beyond doubt or controversy, that there does exist in men a tendency to the use of exhilarating beverages or narcotic drugs.

Man, frequently uneasy and restless, naturally longs for and seeks something to raise him from suffering, and elevate him to what he discovers to be a *pleasurable point* of feeling; a point

which he may obtain from various sources, according to his tastes or inclinations. Sometimes it may be found in the pursuit of art, science, literature, or society; and frequently in the productions of the animal and vegetable world.

The prudent man, especially if he be a man of domestic habits, may be content with the exhilaration afforded by his tea or coffee, and his cigar. One may be satisfied with home-made wine, cider, or beer; another thinks he requires a stronger stimulant, and another a still stronger, who partakes of more dangerous varieties, till he becomes narcotized or drunken.

Whisky and brandy are the intoxicants of America, Russia, Scotland, and Ireland; ale and beer, of England, Germany, Japan, and Egypt; wine, of France and Italy; bouza, of Nubia; pulque, of Mexico; tuka, of Kamschatka; betil, of Polynesia; arrack, of Africa and Hindoostan; opium and shamshu of China and Turkey; bangue and hashish, of Arabia and the Grecian Archipelago; coca leaves, of Peru; palm leaves, of the palm countries; hyoscyamus, of Syria; rue, of the Crimean valley; and, in more recent times, ether and chloroform among the cultivated and refined of our own country.

It thus appears clear that the production of intoxicating beverages or drugs is restricted to no country or clime. It is as widely spread as the existence of language. Wherever we find a national speech, there we as certainly find a national intoxicant; nor does this remark apply only to the present age, but, as far as the voice of history can be heard, it applies to *every* age of the world. Whence this universality of production? How happens it that, in every country and clime, plants grow, which are capable of yielding intoxicating products — such products as possess the threefold quality of exhilarant, roborant, and anodyne, and which are either deleterious or beneficial according to the quantity used? Observe the adaptation. Man, says a poet and philosopher, is at once "*the child and sure heir of pain.*" He needs many a time such a draught as may exhilarate, strengthen, or compose. Nature, aided by human ingenuity, supplies it. Shall we say that man must not partake of these products? Let us consider. Nature offers them with a liberal hand. There is within man a sense of want, which bids him partake. Nature, however, human experience, our own observation, and the moral law, prescribe the limit — *moderation;* beyond which, suffering is the result.

In view of the wide-spread evils resulting from the careless and indiscriminate use of such beverages, it seems to be the province of the medical profession to recommend only the common use of such as experience has proved to be safe, and abstinence from those known to be injurious.

A philosophic writer has said: "*Every inordinate cup is unblest, and the ingredient is a devil.*"

Unhappily, men do not partake in moderation, and therefore must, and do, endure the penalty. With a "demon" in the breast, their sufferings are fearful, till even *death* seems a shelter from the agony of a lacerated constitution and an avenging conscience. In this category falls the habitual drunkard.

What is our duty towards him? What prescription has the medical fraternity that shall meet his case? Are there any means even to restore partially our brother man to ease and serenity, and to throw around his spirit a shadow of hope even for corporal salvation? We believe there are such means.

The popular cry is, "Remove the cause." If we ask for the cause, the answer is, "The dramshops, and the law by which they are authorized and sustained." In view, however, of the momentous facts already referred to, your committee must take a broader and deeper view of the causes which underlie this evil. It is alike unphilosophical and unjust to classify social usages and dramshops as the chief causes of intemperance. They are temptations, *not* causes; temptations which are in the way of sober people as well as of those who drink. In dealing with this subject, we should be careful in the use of terms, and understand the terms we use.

A cause is an *invariable antecedent.* Drinking at dramshops or in social circles does not invariably antecede the habit of drunkenness, but a susceptibility or capacity for such a condition must always exist in the person who becomes an inebriate. The dramshop or social glass may only be the occasion.

Some forms of intoxication are peculiarly exclusive. The custom of "treating" at public bars is applicable only to a class. The habitual drinker indulges at home, in his office or place of business, at particular times and under circumstances of unusual effort or exposure. He does not think of depending upon invitations and associations for the enjoyment of his accustomed draught. With him the demand is from within; a craving analogous to that of hunger, which he feels must be satisfied or he is unfitted for the service of life.

Many a periodical inebriate carries liquor to his room, and remains for days, and even weeks, in seclusion, while he passes through the satisfying narcotism which obliterates all thought and care from his mind, and puts his body in a condition of protracted slumber and repose.

Opium-using is a secret vice. Hashish is used privately, and ether and chloroform are inhaled in solitary places.

In considering this matter, it is well also to bear in mind the fact that the majority of persons who are exposed to these temptations do not become inebriates. In other words, they are either free from the desire for such indulgence, or they have moral power sufficient to enable them to subdue and control their appe-

tites. Only those people become drunken who possess the susceptibilities and tendencies which incline them to seek excitants, and who, on that account, are more likely to yield to temptation. Why do some men drink to excess? Why do others, who are exposed to the same temptations, abstain from drinking at all? When we reach the difference between these two classes of persons, we reach causes.

It is therefore respectfully submitted that if intemperance is an offence, an immorality, the distinction is unfair which reproaches the man who establishes the habit of intoxication by the use of alcoholic liquors, while he who does the same thing by the use of opium or other drug is relieved of such reproach.

When we consider the damaging influence of the opium habit especially, how it degenerates the nervous force, demoralizes manhood, and paralyzes labor—how it holds its victim a bondman, with no intermission of freedom and no promise of escape—it is difficult to comprehend the ethical code which passes such slavery by as innocent, and yet holds the less serious case as guilty.

The singular compounding of these diseased conditions with judicial opprobrium and public disgrace, is a point which we feel called upon to notice.

Civil Aspect.—This brings us to the civil aspect of the subject. The time was when insane persons were punished; they were victims of an unrighteous law and a bitter public sentiment. They were chained, beaten, and starved, and the madhouses were Bedlams where the hard hand of tyranny crushed the sad victims of mental disorder. Nor was it until the benign attributes of the medical profession were brought to bear upon the subject of insanity, that its treatment was transferred from the prison-keeper to the doctor of medicine.

What was true of the insane a century ago, is, with some modification, true of the drunkard now. The law regards him as an offender, subjects him to arrest and fine, or imprisonment, and the public looks upon him as a nuisance and burden. His sorrows are made texts for sermons; his eccentricities are caricatured by itinerant lecturers; his bruises and scars are pictured for public stereoscopic displays; and the tendency of the popular teaching of the day is to separate him from public sympathy, and oppress him with the sense of a self-imposed and willing degradation. We admit that he has committed an offence, but that he is not on that account to be deprived of sympathy and assistance.

Physicians, whose calling leads them among scenes of distress, and whose counsel and confidence are sought to relieve those who suffer, are accustomed to draw a veil between the scars and tears of families where they minister, and the gaze of the world. This being their sacred office, they look with detestation upon the common practice of making a display of the drunkard and his house-

hold for public entertainment, and are free to express their unqualified opposition to such a course.

Duty of Physicians. — We have now reached the inquiry as to the duty of physicians, and would first remark upon our relation to the inebriate in private practice. At present, the drinking man hesitates to consult his physician till the occurrence of mania or other acute symptoms makes it necessary. He realizes that he is disgraced, and hesitates to relate his symptoms to any one. His honor and manhood being compromised, he makes a determined effort to maintain his independence, and avoids conversation or counsel about himself. He thinks there is no sympathy for him, and, brooding over the compunctions and sorrows that are within him, abandons himself to his forlorn condition, and bears alone the burden that should be shared with his medical adviser.

This estrangement between physician and patient doubtless has its origin in the idea of criminality that is associated with the fact of intemperance; and it is only needful that it should be publicly recognized as a disease, in order to secure confidence and freedom on both sides. Until this is done, there can be no reasonable basis for profes-ional counsel.

On the part of physicians themselves, there does not seem to be a full appreciation of their position and its requirements. Let us consider this a moment. It is said that we, as a profession, are doing much to promote intemperance by the administration of alcoholic remedies. Whether this be true or not, is a question which each one of us should gravely consider for himself. We have all the varieties of intoxicating beverages, and more than two hundred alcoholic remedies, at our command, for the treatment of all sorts of diseases requiring stimulants and narcotics, and it would be unreasonable, and even arrogant, to suppose that there is not occasionally misdirection in their choice and prescription. All this may be acknowledged, without admitting any more than the fallibility of human judgment and the uncertainty of human skill. While we have no sympathy with the wholesale clamor against the profession on this account, we believe there is need of caution in the administration of intoxicants to persons in whom the tendency to excess in their use is apparent.

The relation of our profession to this subject is peculiar, and, for this reason, important and responsible. No other class of men has a legal right to authorize persons to use intoxicants. Ministers of religion may teach the principles of temperance; lawyers may stand in the breach between the law and the offender; lecturers may be very eloquent over the evils of excess; but physicians only are authorized to *prescribe and direct the use* of these articles. So far as the consumer is concerned, he occupies a very different position when he takes them from the hand of his medical adviser, and when he goes of his own accord to a legalized

place of sale and purchases them. In the one case he relieves himself of responsibility, and in the other he assumes it. To him the moral aspect of the case is widely different.

What, then, is required of us? In considering this question, we are impressed, first, with the conviction that it is our duty to influence the public mind, so far as we may, in the direction of sympathy for the *entire* class of excessive drinkers. Intemperance is a public evil, and, as such, we must reach it primarily through public sentiment. That sentiment should lay aside its reproach and disgust, and adorn itself with charity. When this shall be done, society will have taken its first step towards the recovery of the inebriate, and its own security.

The method which is now popularly employed is to appeal to the conscience of the inebriate. His conscience admits the reasonableness and justice of the appeal. He knows, but does not perform. Like Paul, the apostle, he declares: "For to will is present with me, but how to perform that which is good I find not." A distinction is thus drawn between willing to do a thing, and the power to do it; and because this distinction is not incorporated with the morality which is popularly applied to this subject, the efforts to reform inebriates by such appeals are usually unsuccessful. Conscience, in such cases, is sensitive — so sensitive that it shrinks, like a hurt child, from contact even with what is good for it — but its power is gone. It is a slave to passion. It strives with the gross and hurtful, but yet it is overcome. As a philosopher has substantially said: If conscience were as powerful to do as it is sensitive to feel, and authoritative to direct, the world would soon find itself on the side of right.

In addition to this, a subscription to a pledge of total abstinence is demanded, and that it may prove effectual, the influences of association, and all the dramatic effect of secret and imposing rituals is added; but these reach only exceptional cases. The result of all this kind of effort, sustained by so much talent and piety, and continned so perseveringly over so many years, and sometimes incorporated with political action, has not, in the opinion of your committee, accomplished what its friends and supporters had reason to anticipate. We have no controversy with such efforts, nor do we discredit their sincerity and earnestness, but simply deplore their failure to accomplish the good which was intended.

As physicians, we have specific duties to perform. There is reason to fear that alcoholic liquors are employed too freely, especially among young persons; and that such practice is productive of evil consequences. We should see to it that we do nothing that may prove the occasion for excess on the part of those who commit themselves to our care, if it can be avoided. We are also called upon to instruct the families for whom we prescribe,

and the communities in which we live, concerning both the causes of intemperance, and the uses of alcohol. Popular ethics classes all beverages containing alcohol among the poisons, and popular ignorance raises its voice against their use on this account. Notwithstanding this, one truth still exists, viz.: that nature, science and experience can not be obliterated by the clamorous platitudes of men who, however good their intentions may be, are not the competent tribunal by whom this question of the use of alcohol is to be determined. Nature is the founder, science the expositor, and experience the judge, by whom we are to be guided in the decision of this question.

We have seen that the experience of mankind the world over testifies to, and defends the use of such excitants for the purpose of exhilaration and enjoyment. Let us now notice the never-to-be-forgotten fact, that they are also used for the purpose of supporting the system in the absence of ordinary food. That this is the case is one of the most astonishing results of human discovery. Anstie reports well-authenticated and extraordinary instances of the power of alcoholic liquors not only to sustain life in disease, but to supplement food in conditions of health; and it is probable that such instances have occurred in the experience of most of the members of this Society. He speaks of alcohol as an article of diet, and you may remember the case of the octogenarian soldier, who had subsisted for twenty years, in good health, on a bottle of gin, and a small crust of bread daily. It is a well-known fact, that the coca chewers of Peru are capable of sustaining a vast amount of labor for a very long time without food, if they can be allowed their accustomed quantity of coca. The power of tobacco, also, to compensate the want of ordinary food, is too well known, not only by consumers of the weed, but by all well-informed persons, to need demonstration. Soldiers, during our late war, frequently and cheerfully sacrificed a ration for the sake of a "quid."

Opium is remarkable for this compensating property. Eastern travelers have publicly declared, that their horsemen and guides would do more work under the stimulation of moderate quantities of opium, than by taking the habitual meal without it. The workmen in opium factories enjoy as good health as those who work in other factories. According to De Quincey, the operatives in the mills of Manchester use the drug, not to produce exhilaration, but to relieve what we have referred to in this report, as an uneasy, restless feeling, but what he calls a sense of fatigue and depression. It is for this purpose it is commonly used among the Orientals; but as its repetition is necessary to keep up the impression, the habit gradually fixes itself in the system.

Objection is made to the use of alcohol, because its effect is to stimulate temporarily, and it requires repetition. We submit that

this objection does not benefit the argument against the use of alcohol. The same may be said of the food we eat, and the air we breathe. We constantly need the punctually returning meal, and the ever present vital influence of atmospheric air. The suspension of either would be fatal.

It is assumed, also, that alcohol is not transformed in the system. The same may be said of water, without which we cannot survive. It is water all the time, and escapes in the same quantity that it is received into the body. In admitting this assumption (that alcohol is not transformed) for the sake of argument, your Committee do not adopt it as true, because the most reliable observers and experimenters upon the subject have demonstrated that alcohol may be appropriated by the system, and sustain life in the same way that food is appropriated, and enters into the nutrition of the body. Close observation in the alcoholic treatment of several diseases will frequently discover this fact. Large quantities may be taken by the patient, and there is neither exhalation of alcoholic odor from the lungs, or trace of it in any of the secretions.

We do not present these facts as arguments in favor of the habitual use of alcohol or any other inebriant, but simply as physiological truths which we cannot gainsay. It is bad logic and philosophy, and *worse* than bad physiology and therapeutics, to object to the use of alcohol on the ground that it is a poison, or that it is not assimilated.

In urging upon the non-medical advocates of reform to award to alcohol its true place and power, we are but fortifying them with truth, without which no cause will prosper. There are natural and prudential reasons why alcohol should be used with the utmost caution, and there is no need of straining truth, or perverting scientific facts in order to find arguments in favor of temperance.

Relation of the State.—The next point to which we invite attention is the relation of the State to this subject, and, in discussing it, we may simply advert to her position towards others who claim her care. It is taken for granted, by all classes, that the number of habitual inebriates in Pennsylvania, is much greater than all the insane, blind, deaf-mutes, etc., for whom the State makes liberal provision, and it is assumed by sociologists, and heralded throughout the land, that intemperance is one of the chief causes of these several maladies; yet, while we have institutions reared by public and private benefactions for all of them, neither the wisdom of our legislators, nor the philanthropy of our people has comprehended the necessity of offering shelter, and furnishing judicious care for a class of persons, of whom there are none more cultivated in intellect, more generous in heart, or more capable, under conditions of health, of adding to the culture and prosperity of the Commonwealth.

The question may be asked, What experience have we to justify the establishment of institutions for the care and treatment of persons who are addicted to alcoholic and opium excess? Our answer is that the experiment has been successfully tried in Massachusetts and New York, under the patronage of these States, and, for the last two years, at Media, Pennsylvania, by a private corporation. The results have been more satisfactory than with any other class of hospital practice, excepting only accidents and acute diseases. Your Committee believe it is not claimed by any of the distinguished gentlemen who have charge of hospitals for the insane in this country that even twenty per cent. of chronic cases recover; and chronic cases are generally understood to be those whose insanity has existed more than a year. Patients, however, who have been addicted to excess in the use of alcohol, opium, etc., from five to twenty years, have recovered in a larger proportion than is claimed for chronic insanity, though such persons, if they would continue free from danger, should totally abstain from intoxicants.

Another question is not unfrequently asked, to wit: Are the cures permanent? From ignorant or unprofessional minds this question may be excusable, but from physicians it is quite the reverse. It is a question the propriety of which we would not acknowledge, as related to any other known disease. We attend patients with fever, rheumatism, pneumonia, etc., and they recover; but no conscientious and intelligent practitioner will say "the cure is permanent," and advise his patient to go into the world again, pursue his business, and expose himself to all the influences which induced his attack, with the assurance that he will never have a recurrence of the disease. We send our patients to hospitals for the insane, and to general hospitals, according to their necessities; but the physicians in charge of such institutions do not send them back to us cured, and tell us "the cure is permanent." Such a statement would imply a re-creation of the patient without the tendencies and infirmities common to men.

The testimony of those whose experience in this matter entitles their opinion to consideration and influence, is that from thirty to fifty per cent. of patients in institutions for the intemperate, who were formerly a burden to their families, return again to society, capable of successful occupation in the affairs of life. That this percentage is large and satisfactory all will admit, and that it may be increased with advanced knowledge and improved appliances, there can be no reasonable doubt.

Are Inebriates Insane?—We have now reached a point, in this discussion, of great practical moment to those who are addicted to alcoholic and opium excess. Are such persons insane? To answer this question logically and fairly, we must distinguish.

The word insane, according to its etymology, means unsound, and in this indeterminate sense is often loosely used. If this broad definition be accepted, every man who exhibits disordered mental action, is insane. Under it is embraced not merely the drunkard, but all human beings. To use the word in this sense, therefore, would be manifestly unreasonable. Few persons would be willing to hazard the opinion that the celebrated Thomas De Quincey and Samuel Coleridge were insane, even through the years of intemperate indulgence during which their celebrity was chiefly gained. Men who are intemperate, either from opium or brandy, are not, in the majority of cases, men of insane intellect. Medical observation and diagnosis have, we think, distinctly proved that the diseased portion of the mind in such cases is chiefly of the will, not the intellect. They know, but are *impotent to perform*. An able medical writer, Dr. John Reid, in speaking of nervous disorders, says: "We often act upon the ill-founded idea that such complaints are altogether dependent upon the power of the will, a notion which, in paradoxical extravagance, scarcely yields to the doctrine that no one need die, if with sufficient energy he determined to live."

An intoxicated man may have hallucinations, be troublesome, and even violent, but such irregularities are analogous to symptoms of mental disturbance that are frequently witnessed in the course of acute disease — as the delirium in fever, and in the various forms of cerebral inflammation — and which passes off in a few hours or days, without the patient being considered insane.

Hallucinations and illusions may exist without insanity. They do not necessarily involve perversion of intellect or judgment. Indeed the reason may be quite clear, and competent to discover the existence and causes of those sensations, without being able to control them. Writers upon this subject speak of "insanity of the will," by which they mean a *perverted* will, that prompts to extraordinary acts which the insane person commits with full intent, and matured design, and enjoys satisfaction with the result, however distressing or dreadful it may be to others. Many inebriates *will* to abstain from excess in the use of intoxicants, and, indeed, determine to abstain totally, until the occasion presents which controls the will, but does not pervert it.

They act in opposition to it. They are captives, and the will yields to the insatiable demand of physical unrest and depression, or moral infirmity. When it is over, they are stung with the bitterest remorse, and sink into the deepest penitence and sorrow. Such, however, are not the fruits of insanity.

If these propositions are true, it is clear that institutions for insane persons are not the best means for the restoration of the

class we are considering, and we think we have the concurrent judgment of most, if not all, *experts* in the department of insanity, in support of this opinion.

The Opium Habit.—In conclusion, your Committee beg leave to refer briefly to a single fact concerning opium, without which this report would not cover the whole subject referred to the Committee.

The opinion that the opium habit is greatly on the increase in nearly all communities seems to be gaining strength, and especially does it seem to be increasing in those communities and states where the sale of intoxicating liquors is prohibited by law.

It is generally admitted that opium and alcohol are more largely used in medicine than any other drugs, and it cannot be denied that the effects of the abuse of these two wonderful products are most pernicious and destructive. They cannot be abandoned as remedies. They are too essential and too potent to be overlooked. They come to us laden with power for good, when properly used, and power for evil, when abused. Increased care on our part, increased intelligence concerning their true qualities and place, on the part of the people; and a sounder philosophy on the whole question of human necessities, by public teachers, will do much to correct the evils from which the community now suffers.

We have stated that from thirty to fifty per cent. of cases of habitual alcoholic intoxication are curable, and we now make the additional statement, that from our own observation, ninety per cent. of opium cases are curable, under institution treatment.

Your Committee regret that they have not been able to present a more complete and exhaustive report; but with very little literature and still less authority on the subject, we have been compelled to draw upon our own limited observation and experience for most of our propositions and conclusions; and we ask for them a candid review and criticism by the profession, whose responsible and dignified prerogative as teachers and reformers has been frankly set forth in the body of this report.

JOSEPH PARRISH,
EDWARD WALLACE,
WM. B. ATKINSON,
JAMES KING,
JACOB PRICE,
Committee.

Original Communications.

ARTICLE I. — *Remarkable Case of Somnambulism.* By J. A. A.

IT was my fortune during a series of years to have under direct observation, a case of somnambulism, in some respects more remarkable than any other upon record. The subject was a family relative and private medical student of my own. He attended his first course of medical lectures at the old Indiana Medical College at Laporte, in 1849, and subsequently graduated at the Medical Department of the Michigan University at Ann Arbor, in 1852. He entered upon the practice of medicine at Holland, Mich., soon after, where he continued until a little after the commencement of the war, when he became connected with the army as a contract surgeon, and was in active service until its close. For some little time after, he sought restoration of his shattered health by rest, but unfortunately, whilst yet feeble, he was prostrated by typhoid pneumonia, to which he succumbed in a few days. He was widely known, and very many persons are familiar with some of the facts about to be detailed.

The first time he was ever known to walk in his sleep, was in the spring of 1847, and the first attempt was an unfortunate one, as he fell into a stairway which was unprotected by balusters, injuring himself considerably, although fracturing no bones. He had risen and dressed himself, but when awakened by his fall was utterly ignorant of his whereabouts. I saw him a few minutes afterwards and found nothing unusual about him, but he remarked that he had not felt quite well when he went to bed. For some months subsequently he would now and then get up, dress himself and go about the house without any apparent object, and usually after a while return to his bed voluntarily, awaking in the morning with not the slightest recollection even of a dream.

My young friend was an enthusiast in music, and a very respectable amateur. About the summer of 1847, a somewhat dilapidated bass viol, which was a kind of heir-loom in the family, was brought into the house, and he devoted spare moments to learning how to play upon it. Unfortunately, the

antiquity of the instrument had told upon its keys, and unless they were wetted at each time of use, it would not remain in tune. He was determined, however, to command its notes, and succeeded. His somnambulic walks, thereafter, led him from his chamber to the parlor, and to the bass viol, and the family would be awakened in the small hours, by the inevitable tuning up prelude, mingled with slipping of the old keys, and quiet objurgations upon his part. Sometimes the bridge would fall down when the keys slipped, and sometimes a string would snap or escape from the keys, nevertheless he would persevere, repair damages, tune up, and then execute all varieties of music of which the machine was capable, not unfrequently accompanying it with his voice. All this would be done in total darkness. When any one entered the room with a light, he took not the least notice, although when spoken to he would reply in monosyllables or with considerable asperity. His face was usually flushed, although sometimes pale — the features immobile and passive, the eye open, pupil dilated, the surface glazed, and the lids apparently motionless. The extremities warm and the pulse full, frequent and soft. Very often the skin would be bathed with free perspiration. Remarkably sensitive to titillations when awake, there seemed total absence of reflex movements from this cause, whilst in the somnambulic state.

As he extended his acquaintance with music and musical instruments, his feats became wonderful. Whilst in attendance upon the Medical College at Laporte, the household looked forward with high anticipations to the hours when his skillful touch of the melodeon would wake them. He had a voice of the purest tone and very considerable compass, in fact, of rare sweetness. I am enabled to say from a multitude of observations, that he played with a precision and skill while asleep, that he could not approximate while awake. Beside this, he would execute music which he had heard, perhaps, but once, the evening previous or after a long interval — no note of which he could recall in his waking moments. His memory here seemed wonderfully exalted. If interrupted, he was irritable in the extreme, but would go on with his music exactly from the point of interruption.

Among the numberless exhibitions of his somnambulism, I have time only to notice a few of the most striking.

Whilst attending lectures at Ann Arbor, where I was then lecturing on Physiology, I requested his assistance in enlarging some of the drawings illustrative of minute anatomy and histology, for use in class demonstrations. He entered into the work with great zeal, and proved very expert and rapid in execution. One evening, previous to the day on which I was about to lecture on the kidney, I wished the cuts in Carpenter's Physiology, illustrating the tubular arrangement, etc., were ready. He had an engagement for the evening, but said he would try and prepare them in the morning. During the night he rose, dressed himself, played a few tunes on the guitar, part of the time singing (and, by the way, the guitar was about as dilapidated as the bass viol before noticed, and he had to knot one or two of the strings first), and then arranged the drawing paper, prepared his India ink and brushes, took the parallels and pencils and laid off the spaces, and worked for half an hour or more rapidly and perfectly, nearly completing the figures on pp. 596 and 597 of Carpenter's Principles, in the edition of 1853. His were taken from a previous edition not now in my possession. These drawings are now in the series used for illustration in Rush Medical College. Although we had a light in the room while watching him, he went on with his work entirely regardless of it. Before completing the work, he went to bed and slept until the usual hour in the morning, when at the breakfast he asked if he had been up in the night, as he had *dreamed* that he had. This was the only time he ever remembered even dreaming about being up or occupied in anything. He had by this time become so fully aware of his habits, that nothing of the sort astonished him. Shortly after this he went to spend the night with a fellow student, but a little after midnight he rose, dressed himself, and went out, followed by the other gentleman, walked down to the Exchange Hotel, where there were a number of his acquaintances and others waiting for a train of cars due at that time. Some one rallied him on his being out so late, but being cautioned by his companion, they did not attempt to awake him, but watched his movements. On being invited, he took a glass of ale, and then said he would only have time to go home and get his dinner before the afternoon lecture hour. He walked with his friend to our door, and was indignant to find it locked. His room mate (a cousin) admitted

him and awakened myself and wife. He asked if dinner was ready, and seemed astonished that it was not; then said he would get a drink of water and be off, "for old D. (one of the faculty) would be mad if he was late." I told him he had plenty of time and he need not be in a hurry. He then walked into the kitchen, drank a tumblerful of water, and looking up to the clock, although it was totally dark, remarked the time, and started for the front door. I then told him that I was not feeling well, was pretty blue, and wished he would sit down and play euchre with us. This seemed to please him, and he took off his overcoat and said he had as lief play until "old D." was through lecturing, as to go.

His cousin sat down at the table with us, and we played "three-handed (cut-throat) euchre." He paid not the slightest attention to us, although we passed the cards backwards and forwards between us, exchanging hands, and everything we could do to attract his attention. He dealt the cards in his turn, correctly, and played "according to Hoyle." In one hand, spades were trumps, and he held the jack of clubs. Clubs being led, he first threw down this jack, then quickly picked it up, saying, "I forgot that was the left bower." It is somewhat humiliating to record that, notwithstanding our tricks and devices, he beat us in the game.

On its conclusion, he got up hastily and insisted upon going to the college. We only prevented him this time, by throwing water in his face — the only method, by the way, in which we could awake him without great violence. Pungent odors, ammonia, camphor, etc., he seemed to disregard, or merely pushed away the object.

On regaining consciousness, he always appeared like one stunned, or suffering from a severe shock. The influence upon the pulse and nervous system was always so severe, that we never awaked him at these times if we could avoid it.

Whenever a little out of health, as from trifling attacks of indigestion, or after watching with the sick, or fatigue, he would be sure to be up and doing something notable in the somnambulic state.

One of the most remarkable of his exploits occurred several years after the incident just given. I think it was in 1860 or 1861.

He gave me the particulars himself, and I have had the necessary concurrent evidence from others. The circumstances were so extraordinary, that they almost caused him to determine never to practice medicine again.

In the rounds of his practice he had a patient, about whom he was very anxious. It was in the coldest winter weather, and the residence of the patient was about two miles distant. Visiting him early in the evening, he found him in a state so unsatisfactory, that he informed the family that if he did not find him better the next visit, he should change the medicine entirely. On rising the next morning, he went to the barn to put his horse to the cutter for an early start. He was a little puzzled at finding things somewhat misplaced, but supposed some person had been in the stable in search of a missing article. On visiting the patient, he was gratified to find a marked improvement. He inquired when the improvement commenced, and was answered, "Immediately after taking the powders which he had given in the night." The truth flashed upon him at once, but concealing his emotion, he inquired, with as careless an air as he could assume, "About what time was it when I was here?" They replied, "Between two and three o'clock." This proved to have been the case, as he was afterwards told by the family where he boarded. He had been giving the patient some fluid medicine, which he ordered discontinued, and then put up several powders, such as he had concluded upon the night previous, combining them as usual, and administering the first one himself.

The alarm of my poor friend, at the possible consequences of a similar act in the future, may well be conceived.

The considerable length to which this sketch has already extended, must prevent comment on the peculiar features of this case, which must, as before suggested, be considered one of the most remarkable of record. I could detail a large number of equally striking facts in his history, with experiments instituted as to the physical and psychological condition, did time and space permit.

It illustrated most forcibly the automatic action of certain of the mental faculties, irrespective of *mental* consciousness.

There is a physical consciousness which is something else than a mental consciousness. There is a physical volition which is something else than a mental volition.

All the so-called mental acts, may be carried on automatically, without mental consciousness.

The "unconscious cerebration" of Carpenter, is only an illustration of this automatic action.

In conclusion, it is not out of place to remark, that my friend was of a high order of intelligence, and never could be made a "subject," or a "medium," by the disciples of Mesmer.

ARTICLE II. — *Biliary Calculi.*

THE subjoined sketch of a case of biliary calculi may prove of practical value to some of the readers of the JOURNAL, who may hereafter be called upon to treat this painful and dangerous malady.

Mr. D., 415 S. Morgan street, about fifty years of age, had suffered, during many years, with recurrent attacks of violent pain "in his stomach," so severe in their character as on one or two occasions to prostrate him in the street. Within the past year, the attacks have been more frequent, but less severe. He came under my professional care about three months ago, at which time his condition was as follows: Figure spare and thin; countenance pale, but presenting none of the evidences of cachexia; skin in a healthy condition; respiration and circulation normal; appetite moderately good; had vomited very rarely a clear, watery fluid; bowels constipated habitually; fœces clay-colored, waxy and tough; urine normal in quantity, but high colored.

The pain, which had been occasional was now continuous, and was confined to the right hypochondrium, and accompanied with considerable tenderness; it was aggravated about an hour or two after each meal, from which time it gradually diminished.

Considering the case one of sub-acute gastro-duodenitis, involving partially the ductus communis choledocus, directed half a grain of proto-chloride of mercury every four hours, until five grains had been taken; to be followed by ten grains of sub-carbonate of Bismuth, before each meal. This was followed by such marked relief that the patient considered himself well, and I saw no more of him for two months.

About four weeks ago, the pain returned with redoubled violence. The same course of treatment was directed, but ineffectually. The iodide of silver, in solution, was followed by an aggravation of the symptoms so decided that the patient discontinued its use, after having taken two or three doses. By this time the pain had changed its locality to the left hypochondrium, and its character to a regularly intermittent paroxysmal type, simulating gastralgia very closely. Iron (Quevenne's) 3 grains, and strychnia $\frac{1}{40}$, together with ten grains sub-carbonate of bismuth, every 6 hours, was then administered for two days, without producing the slightest amelioration of the symptoms. A review of the case at this point left the diagnosis somewhat obscure. Believing the position assumed as the basis of treatment to have been clearly determined, the results of treatment indicated that it was at best but a secondary lesion. What was the primary one ?

Of this problem there were three possible solutions. Schirrous of the pylorus gastralgia, and biliary calculi. While the case presented symptoms common to each and all of these conditions, it likewise manifested others quite as contradictory. As an *experimentum crucis*, the patient was directed to take one pint of pure olive oil at a single dose. This was followed within a few hours by free purgation, and the discharge of *fourteen biliary calculi*, varying in dimensions from the size of a pea to that of a grape. The evacuations now resumed their normal color.

The removal of this *fons et origo mali*, left the patient entirely free from suffering, beyond what was occasioned by some slight tenderness in the right hypochondrium.

It is due to a highly esteemed professional friend to state, that the remedy was suggested in the course of an informal conversation, some months since, by Dr. Ira Hatch of this city. Having tested it experimentally, on two occasions, in his own practice, with as complete success, he is fairly entitled to the claim of originality, until the right of priority is clearly established by another.

W. H.

No. 188 S. Sangamon Street,
November 4, 1869.

Editor's Book Table.

[NOTE.—All works reviewed in the columns of THE CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. Keen & Cooke, whose catalogue of medical books can be had on application.]

Sleep, and its Derangements. By WILLIAM A. HAMMOND, M.D., Professor of Diseases of the Mind and Nervous System, etc., Bellevue Hospital Medical College. Philadelphia: J. B. Lippincott & Co. 1869. Pp. 318. W. B. Keen & Cooke.

PROF. HAMMOND is one of our most industrious physiologists and most acute observers. In the book before us he has brought together a variety of facts, experimental and observed, which render it both valuable and interesting. However we may dissent from some of his conclusions, he manifests a zeal for discovery, and a candor and clearness in stating his opinions, which entitle whatever he writes to a respectful consideration. We have read the present treatise throughout with pleasure, and, at times, we might almost say, with fascination, and yet have laid it down with a vivid sense of disappointment. Perhaps no essay on the subject could fail in this result; nevertheless we are convinced that a proper recognition by the author of certain well established physiological principles, would have served to clear up portions of his subject which are now left obscure. The commanding professional position, and worthily won wide reputation, of Prof. Hammond, demand more than a passing notice of what he puts on professional record.

After calling attention to the necessity of sleep, or cessation of action for a temporary period, for each organ or apparatus of the system, the heart resting six hours of the twenty-four, the lungs eight, etc., and that this necessity probably extends even to organizations of the vegetable world — wherever use causes decay — he proceeds to discuss the causes of sleep, and adduces the varied opinions which have obtained, the most referring it to congestion of the cerebral vessels, or pressure from some cause on the cerebral mass, he observes that this idea has prevailed from

observing the *stupor* which notably results from these causes. But, according to Dr. H., stupor, coma and sleep are neither identical, nor even phases or grades of a similar condition. The only point of resemblance between coma and sleep consists in the fact that both are accompanied by a loss of volition. We quote:

1. In the first place, a stupor never occurs in the healthy individual, while sleep is a necessity of life.

2. It is easy to awaken a person from sleep, while it is often impossible to awaken him from stupor.

3. In sleep the mind may be active, in stupor it is, as it were, dead.

4. Pressure upon the brain, intense congestion of the vessels, the circulation of poisoned blood through its substance cause stupor, but do not induce sleep. For the production of the latter condition a diminished supply of blood to the brain, as will be shown hereafter, is necessary.

In investigating this last proposition, the author trephined dogs, and observed carefully, and even, by an ingenious appararatus described in the appendix, measured the collapse of the cerebral mass during sleep. Similar observations in cases of traumatic removal of the skull from the human being, congenital deficiency, the fontanelles of infants, etc., concurred to the same judgment.

"We thus see that the *immediate* cause of sleep is a diminution of the quantity of blood circulating in the vessels of the brain, and that the *exciting* cause of periodical and natural sleep is the necessity which exists that the loss of substance which the brain has undergone should be restored.

* * * "Whatever other cause is capable of lessening the quantity of blood in the brain is also capable of inducing sleep. There is no exception to this law, hence we are frequently able to produce this condition at will."

Thus heat, cold, voluntary diminution of attention, or fatigue, the process of digestion, excessive loss of blood, debility, and the action of certain medicines.

In the next chapter, describing the physical phenomena of sleep, it is stated that

"The ganglionic nervous system and the spinal cord continue in action during sleep, though generally with somewhat diminished power and sensibility. The reflex faculty of the latter organ is still maintained, and

thus varied movements are executed without the consciousness of the brain being awakened.

"Somnambulism is clearly a condition of exaltation in the functions of the spinal cord, without the controlling influence of the cerebrum being brought into action."

The fourth chapter considers the state of the mind during sleep, with the following conclusions:

1. Feeling — embracing sensation and emotion — is suspended, so far as the first is concerned; but is in full action as regards the second.

We do not see, hear, smell, taste or enjoy the sense of touch in sleep, although the brain may be aroused into activity, and we may awake through the excitations conveyed to it by the special senses. The emotions have full play, unrestrained by the will, and governed only by the imagination.

2. The will or volition is entirely suspended.

3. The thought or intellect is variously affected in its different powers. The imagination is active, and the memory may be exercised to a great extent; but the judgment, perception, conception, abstraction, and reason are weakened, and sometimes altogether lost.

The fifth chapter treats of the Physiology of Dreams. His opinion is summed up in the statement that

"Dreams are directly caused by an increased activity of the cerebral circulation over that which exists in profound sleep. This activity is probably sometimes local and at others general, and never equals that which prevails in the condition of wakefulness, when the functions of the brain are at their maximum energy."

In this chapter occurs the following paragraph, to which we wish to direct attention. We quote the sentences only to enter, also, our earnest dissent and protest. It is on a par with some of the teachings in poor old Paine's "Institutes," and is grossly unworthy the magnificent intellect of Prof. Hammond:

"Writers who contend for the doctrine of constant mental activity regard the brain as the organ or tool of the mind, a structure which the mind makes use of in order to manifest itself. Such a theory is certain to lead them into difficulties, and is contrary to all the teaching of physiology. The full discussion of this question would be out of place here; I will therefore only state that this work is written from the standpoint of regarding the mind as nothing more than the result of cerebral action. Just as a good liver secretes good bile, a good candle gives good light, and good coal a good fire, so does a good brain give a good mind. When the brain is quiescent there is no mind."

The sixth chapter treats of Morbid Dreams — prodromic, symptomatic and essential.

The seventh, of Somnambulism, in which he states (p. 218):

"Much observation and many experiments have convinced me that the importance of the spinal cord, as a centre of intellection and volition has been unwarrantably ignored.

"It is, of course, not a matter for doubt that the faculty of consciousness is latent in the spinal cord, so long as the brain is in a state of activity, and that the faculty of memory does not reside in it at all."

Sometimes in the progress of diseases the cord obtains the mastery of the superior organ, and dominates with terrible power. All sense exercised during somnambulism owes its activity to the spinal cord, and in most cases the brain is so profoundly asleep that no impressions whatever are transmitted to the cord, and therefore there are no sensations whatever except that of touch.

In artificial somnambulism — the hypnotism of Braid — this power of the cord is even more higly manifested, and the brain is still even more incapable of control.

The concluding chapters are devoted to the Pathology and Treatment of Wakefulness, Somnolence and "Sleep Drunkenness."

The limits of the present notice will not permit further extracts or even brief abstracts, as we should desire.

Without entering into any general discussion here, we beg leave to append these suggestions:

1. The greater or less amount of blood contained in the cerebral vessels, *per se* explains nothing. There is, when the bones are fully developed and united, a uniform pressure; when there is less blood in the vessels the cranial cavities and cerebral interspaces contain an increased amount of serum. When there is an increased amount of blood there is diminution of the cranio-spinal serum. Cessation of nutrition of the brain mass reveals, *post mortem*, "water on the brain." Hence abundant misconception of necroscopic observations. The amount of blood flowing *through* a part is determined by the amount of tissue metamorphosis, cell or molecular, taking place in that part, whether brain, muscle or gland. Diminished organic change in the tissue of the cerebral mass may lessen the amount of blood *in* it; but it does not

follow that every diminution of the mass of blood will lessen the amount of organic change. More of the blood is used. This is the case often in exhausting hæmorrhages. Rapid organic change is still going on, involving extreme vigilance, and still further impoverishing the blood. Hyperæmia and congestion are not synonymous terms. The first may consist essentially in velocity of transit and not in massing up of the blood. In passive congestion there is slower transit or actual impaction of blood in the vessels. It is not the *pressure* here which lessens the activity of the vital manifestation — brain or other — it is the cessation, or at least diminution of organic change, a circumstance wholly irrelevant to pressure, except in so far as pressure may be a cause of the diminished organic change.

It seems to us nearly time to get our medical language freed from these hydraulic phrases, which have ceased to have any appropriateness or significance.

In sleep there is a diminution, *pro tanto*, or cessation of nutritive changes in the true nervous substance, although the phenomena suggest that the process of removal of effete matters is still going on.

It would appear, indeed, that this latter is an essential circumstance for the occurrence of sleep, for nothing more conduces to wakefulness than imperfect elimination. No agents are better adapted to secure sleep than those which energize this process. This is probably the *rationale* of the use of Bromide of Potassium in wakefulness — a remedy which Dr. H. especially lauds.

Those agents which, like opium and alcohol, in large doses directly check organic changes, are notably followed by unpleasant secondary effects unless activity of elimination is in some manner secured. Indirect narcotics are always therapeutically the best, unless perchance in acute inflammation or other causes of excessive tissue change.

In the stupor or coma from drugs, mechanical pressure, cold, etc., etc., there is simply a more or less complete cessation, both of organic nutrition and elimination; it is not merely a hydraulic process.

2. What *we* call the mind is an assemblage of faculties known to us by its manifestation through certain organized parts. It is not, in our view, a "secretion" any more than light is a secretion

of the retina, or sound of the auditory nerve. Its force or forces we can as well conceive determining cell or molecular changes upon the vesicular expansions of neurine of the cerebral masses, as we can of light rearranging the retinal surface. When the eyelid is closed, we are unwilling to say there is no light, and when sleep stops the changes which in waking moments continually take place in vesicular neurine, we are equally unwilling to say, with Prof. Hammond (p. 111), "*there is no mind.*" We do not dissent from his statement from any mere dread of materialism, but simply because in our view the doctrine is unphilosophical in the extreme, without even the redeeming quality that in some way it tends to simplify and explain.

3. After the first impression of the causes of common, special or mental sensation upon the structure adapted to receive it, all subsequent manifestations are strictly automatic. The mind acts upon and through the nervous system by as truly automatic a mechanism as does the physical stimulus through parts connected through the spinal cord.

Failure to appreciate the phenomena of somnambulism, of whatever character (hypnotism, etc.), arises from want of understanding of this automatic action of the mental faculties, with or without consciousness. Just as some people conceive the excito-secretory process to be something essentially distinct from the excito-motory, so very many seem to apprehend that the mental stimulus acts somehow differently from other stimuli in determining the so-called *reflex* phenomena of life.

Professor Hammond recognizes the "unconscious cerebration" of Carpenter, and yet not coupling this with the true mechanism of automatic mental manifestations, is driven to conceive of a previously ignored centre of intellection, volition and consciousness in the spinal cord (p. 218)!

But we have already vastly surpassed the space we can allot to this book. Let our readers buy and read it, for it is well worth attentive study.

A Handy-Book of Ophthalmic Surgery; for the Use of Practitioners. By JOHN Z. LAURENCE, F.R.C.S., Assisted by ROBERT C. MOONE. Second Edition. Revised and Enlarged by J. Z. LAURENCE. Philadelphia: H. C. Lea. 1869. Pp. 227. W. B. Keen & Cooke.

AMONG the numerous works on this specialty the work of Laurence must take a high rank. It is concise, yet clear and practical. For the busy practitioner, who wishes to consult a high authority and yet not wade through the sea of technicalities which the majority of ophthalmologic treatises half drown us in, this manual is especially to be commended.

It is freely illustrated, and elucidates in a highly practical manner the methods of examination, pathology and curative management of all the leading affections of the eye which are likely to be met with in general practice.

The Pathology and Treatment of Stricture of the Urethra and Urinary Fistulæ. By Sir HENRY THOMPSON, F.R.C.S., etc. From Third and Revised London Edition. Philadelphia: H. C. Lea. 1869. Pp. 359. W. B. Keen & Cooke.

CONTRARY to the usual practice of authors, especially when a book has proved its popularity by passing to a third edition, this author has cut down the bulk of his treatise upwards of eighty pages. Points once in controversy having been settled, need no prolongation of the discussion, and the matured convictions of a well-known competent observer do not demand a tedious catalogue of detailed illustrative cases. The Anatomy and Physiology of the Urethra, with the Pathology of the different varieties of Stricture, their causes, etc., are first given, and then succinct accounts of the most approved medicinal and surgical modes of treatment. It is, perhaps, the best monograph on the subject.

Pamphlets.

Surgery of the Cervix in connection with the Treatment of certain Uterine Diseases. By THOMAS ADDIS EMMET, M.D., etc., New York City.

IN this monograph Dr. Emmet discusses several topics of interest. He justly thinks too much importance has been attached to a detected erosion or so-called ulceration of the neck, when the condition of the cervix is generally but an effect and not a cause.

In the condition known as endometritis, with flexure, he uses large vaginal injections of water at from 98° to 104°. General therapeutic measures, of course.

For local treatment he prefers a solution of chromic acid, Churchill's strong tinct. of iodine, the persulphate of iron, and various other astringents, p. r. n.

These he applies by means of his uterine probe or applicator, by which he can get the exact sweep of the canal, saving thereby much pain to his patient. A little cotton is wound around the applicator after the proper curve has been given it, this saturated with the medicament and carried to the fundus. The recumbent position is insisted upon until the effects of the application have passed off. Sponge tents may be required. Twice a month is as often as these applications should be made.

If, after a reasonable period, the flexure remains unchanged, division of the cervix may be justifiable. The important point here is to ascertain whether the flexure is above or below the vaginal junction. Above the junction, division should be considered exceptional to the rule — below this point, it is not infrequently of great service — both for the relief of dysmenorrhœa and sterility. Except in cases of constriction of the os following the use of nitrate of silver, or from other causes, or fibrous tumors, he now never incises the cervix laterally. A division should never be attempted when the existence of perimetritis is suspected.

After detailing the steps of the operation, he calls attention to the fact that alarming hæmorrhage may supervene some considerable time after the operation, from vessels which, when first

divided, contracted so that there was very trifling bleeding. Careful plugging is necessary, and the cervical pledget should be allowed to come away by suppuration.

"Retroflexion can be cured by the long continued use of hot water injections and hot baths, blistering the neck occasionally to deplete by the watery discharge, daily glycerine dressing, and by a careful attention to the state of the bowels and general condition. The malposition may be gradually removed by frequent manipulations: the finger of one hand in the rectum lifting the fundus, and a finger of the other hand in the vagina depressing the cervix. Modifications of this plan by the use of atmospheric pressure, are sometimes useful.

Dr. E. faithfully exposes the disastrous results of improper incisions, and explains cases in which amputation of the cervix may be best.

Attention is directed to the fact that a certain amount of prolapsus may be present, so that without due caution (as has occasionally happened) the peritoneal cavity may be opened at a point apparently distant from the vaginal junction.

Many females, he states, have been assured of cure of the erosion, and yet left in a miserable condition. The neck is found smooth and hard, and, in fact, a mass of cicatricial tissue. Oftentimes the situation is analagous to the "irritable stump." These cases sometimes resist all local treatment, and require excision. It is, however, unnecessary to remove more than a thin section from the entire surface to a limit at which the surrounding tissue can be found free enough to be drawn over the stump, after the plan of Dr. Sims.

The successful result of local treatment is in inverse proportion to the remaining induration, for it is impossible for the uterus to properly perform its function if the cervix is left a mass of cicatricial tissue. As a surgeon, Dr. E. remarks, he has always been conservative, but he has been forced to have recourse to surgical measures, and acknowledges that his ingenuity has been oftener taxed to repair damages inflicted by means used to afford relief, than from the result of disease uncomplicated.

We sincerely hope that those who "think they have mastered the art as a specialty when once in possession of a porte-caustique and a speculum," will ponder these timely words of Dr. Emmet.

Inter-Dental Splint for the Treatment of Fractures of the Inferior Maxilla. By E. A. CLARK, M.D., Resident Physician St. Louis City Hospital.

DR. CLARK has been devoting large attention to the improvement of surgical apparatus and dressings for several years past, and has introduced several valuable improvements. In fracture of the inferior maxilla he contrives two vulcanized gutta-percha splints, conforming accurately to the shape of the teeth in both jaws, or to the alveoli when the teeth are wanting. The upper and lower splints are associated by means of pivots and triangular springs, so that their force will press the inferior maxilla downwards, the splint itself preventing lateral motion. The rubber splints are modeled to the case in the same manner that the dentist prepares his artificial alveolus.

Although not mentioned by Dr. Clark, a similar mechanism is useful in cases of exsection of the lower maxillary. Many years since, the late Dr. Brainard devised such a splint, which was manufactured for him by the well-known dentist, Dr. W. W. Allport, of this city. The appliance in that case proved eminently satisfactory, although several other forms of dressing failed to retain the parts in position.

The great facility with which the vulcanized rubber may be prepared in any shape desired, suggest it as eminently deserving of more general use than has heretofore been made of it.

Our Navy. Its Offence is Rank. Rank in the Navy. Petition. Circular. From D. B., Surgeon U. S. N.

WE had supposed, until quite recently, that a gradual amelioration had taken place in the usages in the naval medical service, which, many years ago, called forth the united remonstrances of the profession. It appears, indeed, that some steps in advance were taken by the government. We quote from one of the papers referred to above:

"The Honorable Gideon Welles, who, from his experience as Secretary of the Navy during the entire war, had good reason to know the value of the other branches of the Navy, established by Regulation, as had ever been the custom in the Navy, certain advancements in their (the staff's) rank, in the lower grades only, partially commensurate with that of the line officers, — not advancing them, however, in the higher grades. This

was done after full consultation, and the unanimous concurrence of the Attorney-General, the entire Cabinet, including President Lincoln, and it is said, also, the whole Supreme Bench. The rank so conferred stood for years as a matter of history and fact. Officers were appointed and confirmed by the Senate, and commissioned as surgeons, paymasters, and engineers, with the rank of lieutenant-commander — a new grade in the navy — under the 'Regulations of the Navy,' which were patent to the world, and were recognized by Congress during several years as valid and in full force."

Nevertheless, on the accession (temporarily) of Mr. Secretary Borie, he decided, on the strength of the opinion of Attorney-General Hoar, that this entire action was illegal, thus remanding the promoted officers, without trial or charges, to the lower rank — *in statu quo ante bellum* — the war wherein they had distinguished themselves, as a class, certainly not less than the officers of the line.

"It so happens that the last Act of Congress on this subject was the indorsement of the General Order of Secretary Bancroft, of August 31, 1846, by Congress, on the 5th of August, 1854, which, according to the ruling of the present Secretary, appears to have been in force illegally for eight years. The effect of this old order, put into action at the present day by Secretary Borie, in his own Order, No. 120, is to stop the promotion of all staff officers at the grade of *commander*, and to reduce many surgeons and paymasters who are over forty years of age, and have been in the navy twenty-five years, to the grade of *lieutenant*. In 1846, that grade was equal to the present one of commander, and the order was a liberal one. Now, owing to the rapid promotion and increase of numbers in the line, a lieutenant in the navy, instead of being forty years of age, is a young man of twenty, who entered the navy during the war.

"To the lasting disgrace of the United States navy, let it be said, that it is the only service now existing where this aristocracy of the line is fostered and encouraged; all other navies have rid themselves of it years ago. In the French and Austrian navies, the staff officers are represented from the grade of rear admiral down to that of lieutenant; in the English and Spanish navies, from vice-admiral; while in the naval service of autocratic Russia, where there exists a superior title to admiral, that of general admiral, the senior medical officer is eligible to that rank, and the assistant surgeon rates as lieutenant, and not master, as with us, nor yet as ensign, as proposed by Mr. Grimes.

"The staff officers of the navy demand that they shall not be thus wantonly degraded; and at the next session of Congress will urge that honorable body to be put more nearly on a par, not only with the line branch of our own navy, but the naval organizations of the whole civilized world."

This demand does not seem to us unreasonable. In every particular of education, native ability and gentlemanly deportment, so far as our acquaintance and information extend, the medical staff "rank" the highest position they have ever been awarded or now claim. We trust not only that this claim may be granted, but such a degree of independence may be guaranteed, that hereafter, at least, no officer of the line may compel a wounded or sick man to go upon duty when the surgeon officially certifies to his inability. If the surgeon abuses his trust let him be tried for the offence, and a suitable penalty inflicted.

This, also, would seem a common-sense proposition; nevertheless, it is but a few weeks since a highly competent and conscientious surgeon was suspended, for two years, if we rightly remember, for refusing to send a disabled man upon duty, at the command of some jack-a-dandy officer of the line.

We know it is very easy to say to the naval surgeons, If you don't like your positions, resign them; but aside from personal considerations, of which we have not space here to speak, but which readily suggest themselves, it should be a matter of professional pride, as it most assuredly is of national and patriotic concern, that the navy should be able to secure and retain medical ability and experience of the highest grade.

Steiger's Literarischer Monatsbericht. A Catalogue of Books in the German Language, Imported, Published and for Sale by E. Steiger, Publisher and Bookseller, 22 and 24 Frankfort Street, New York. For September and October, 1869.

For those of our readers who wish to procure German and other foreign books and periodicals, we refer to this house as prompt and reliable.

Lindsay & Blakiston's Publications. Philadelphia, September, 1869. Catalogue, with prices.

The History of four Cases of Chronic Inversion of the Uterus, with the Account of an Operation Designed as a Substitute for Amputation. By T. Gaillard Thomas, M.D., Professor of Obstetrics, etc. New York.

An exceedingly important paper. A succinct account of the history, diagnosis, etc., of this serious difficulty is given, with

detailed report of four cases; one by Thomas Addis Emmet, M.D., the second by J. Worster, M.D. (New York), the third and fourth by Dr. T. himself. In the last case, he performed the unique operation proposed as a substitute for amputation.

Conceiving the main obstacle to reduction to be a strictured condition of the involuted cervix or even permanent adhesions formed, he first attempted to relieve this by incision, fixing the point of constriction by the finger, then drawing the womb down and cutting through the tissue of the neck, as recommended by Aran. By this act an artery of considerable size was cut, and the hæmorrhage checked with extreme difficulty. Further efforts at taxis were abandoned.

A week afterward, Dr. T. made an incision in the abdominal wall, some two inches in length, as in the exploratory incision of ovariotomy, and having ascertained, by the finger inserted in the uterine sac, that there were no adhesions, he passed in a steel dilator, made on the principle of a glove stretcher, dilated the stricture, and afterwards readily restored the uterus to its place.

Speedy recovery ensued.

Several modifications in the operation are proposed for future cases, which space will not permit us to detail.

The operation was both bold and successful, and what is better, philosophical and promising.

Editorial.

Improvement.

We think our readers will unite with us in the opinion that Messrs. Keen & Cooke, our new publishers, are doing excellently well their part of the work. And all concerned, editors, publishers and printers promise that the future shall show a constant advance.

In the last number were a few vexatious typographical errors, overlooked in hastily reading of proof, but hereafter biblical accuracy will be attempted. Readers will oblige us by correcting with the pen several obvious errors in some of the formulas for prescriptions given in that number under the general head, Loot.

These principally consist in confusion of the ℥ and ℈ denominations. In the September issue, the article on Chinese medicine should have been placed under a different general heading, and credited to the *California Medical Gazette.*

Please aid us with your communications.

Specialties.

MUCH comment is arising with regard to the more stringent enforcement of the rule against advertising of specialties, adopted by the American Medical Association. The letter of the law not infrequently seems repugnant to justice. It is a matter of notoriety that many of the most eminent members of the profession do restrict themselves to the practice of some particular specialty. They proclaim it in the colleges to which they happen to be attached, in the medical periodicals for which they write, the books they compile or edit, and, more loudly still, through partial friends in society.

It passes the comprehension of the present writer, why the briefer and more compendious mode of attaching the name of the specialty practiced to an ordinary business card or advertisement in the medical, or even secular press, should so horrify the brethren. A business card or advertisement, and a fulsome laudation of one's own skill and parade of certificates are very different affairs.

It would seem that the whole thing resolves itself to a mere question of taste, about which gentlemen may differ. To our mind, the specialist assumes the virtue of modesty, although he may have it not, when he writes, or prints his chosen function after his name, rather than, by the use of the major term only, giving space for the belief that he is ready for business in any department.

To the writer it appears that the real point is: Does the avowed specialist *know* any more about it than "any other man"?

Ozone.

HAVE the physicians of this section noticed the remarkable abundance of ozone in the atmosphere during the past six weeks? The unusual prevalence of catarrhal disorders directed our own attention to the subject, and almost daily observations have shown

a remarkable amount of this element present. The test employed was the simple one of Polli's. These autumn days have thus been proved, as Schönbein felicitously termed them, *blue* days. Our own experience has further shown that there has been from, perhaps, the same cause, an unusual prevalence of catarrhal diarrhœas, as well as affections of the respiratory mucus membranes.

ARREARAGES—PLEASE NOTICE.

All persons indebted to the Journal for subscriptions for the present and previous years, or for advertisements in the same, are respectfully requested to remit the amount due to the undersigned or to his order only. I have advanced largely in sustaining it, at great personal inconvenience, and now that the future of the Journal is secured beyond contingency, I trust that these dues, *personally my own*, may be liquidated at the earliest possible opportunity.

J. ADAMS ALLEN,

November 9, 1869. 503 *Michigan Avenue, Chicago.*

Loot.

On Certain Influences of Schools Injurious to Health.

By Prof Rud. Virchow.* *Virchow's Archiv., XLVI*, p. 447, May, 1869.

The injurious influences of schools upon the health of the pupils have frequently, especially since the end of the past century, attracted the attention of physicians and teachers, now on this, now on that point, yet usually without being investigated more exactly, in a truly scientific manner. . . . . Only very few attempts were made, by means of systematic researches, to gain a basis of real facts for forming opinions, and it must be acknowledged a very great advance that a beginning has been made at present in certain directions to procure statistics of what may be called the school diseases. Only extensive, scientifically certain, *comparative* statistics, will enable us to judge, with full confidence, what affections or diseases are produced by the schools,

* This report owes its origin to an investigation by request of the Prussian Government. We consider it of considerable value, presenting a clear and convenient view of this important hygienic question, and therefore give an English version of as much of it as our space will allow.—Ed.

and what means should be adopted to prevent them. Where this basis is wanting, there are still certain general scientific rules, which are applicable to schools as well as to other institutions of society, but it can not be denied that, in applying them, important conditions may very easily be overlooked or wrongly estimated.

The following report will endeavor to keep the two groups as distinct as possible, and carefully separate those affections well established in fact from those merely guessed at. In first line, as regards reliability of actual demonstration, we have:

1. *Affections of the Eye, especially Near-sightedness.* The first (though still inaccurate, and in no wise methodical) endeavors to establish, by statistics, the supposed influence of schools upon the development of near-sightedness, were made in the beginning of this century, by the Englishman Ware. Since then, similar researches have been made in different parts of the continent, particularly in Germany, partly official, partly by private persons, but almost never logically and systematically. Only the investigations of Dr. Hermann Cohn,* of Breslau, both as regards the number of persons examined, and as regards the method and accuracy of observation, have assumed a shape corresponding to the demands of modern science, and may be considered as exceedingly valuable, nay, in a certain sense, as decisive. . . . .

The total result was found to be that, among the 10,060 scholars, vision was not normal in 17.1 per cent., but that the latter figure was very unequally distributed, namely:

In the village schools,	5.2	per cent.
" city primary schools,	14.7	"
" middle schools,	19.2	"
" girls' high schools,	21.9	"
" "Real" schools,	24.1	"
" gymnasia [high schools],	31.7	"

Among the 410 students examined there were found even 68 p. c. with abnormal vision (ametropia).

Now, leaving out of present consideration hyperopia, astigmatism, and the actual *diseases* of the eyes, as of secondary importance, and considering only near-sightedness proper (myopia), still we meet with the distressing result, that in all nearly 10 p. c. of the children are near-sighted, viz.:

In village schools,	1.4 p. c.	
" city primary schools,	6.7 "	city schools 11.4 p. c.
" girls' schools,	7.7 "	
" middle schools,	10.3 "	
" "Real" schools,	19.7 "	
" gymnasia,	26.2 "	
And among students,	60.0 "	

* Some account of these investigations was presented to the readers of this [St. Louis] journal in the January number of this year, p. 73.

The regular increase here presented in the aggregate is repeated in a remarkable manner in taking separate account of each school according to classes:

	VI.*	V.	IV.	III.	II.	I.
Primary schools, - -	—	—	2.9	4.1	9 8	9.8
Gymnasia, - - -	12.5	18.2	23.7	31.0	41 3	55.8

The unfavorable opinion of Dr. Cohn is, therefore, unfortunately, incontrovertible, the less so since he shows, by extensive tabular evidence, that not alone does the number of the near-sighted increase from class to class, but the degree of myopia likewise rises. . . . . The myopia in these schools, therefore, is on the whole *progressive;* it pursues that dangerous path which gradually leads to actual asthenopia.

Dr. Cohn justly disavows the opinion that the enormous frequency of myopia among school children should be ascribed solely and exclusively to the school. Outside of the school, even under the parental roof, many unfavorable conditions are evidently operating. . . . . Nevertheless, it may be affirmed, with full assurance, that persons of the age of scholars in the first class of gymnasia do not average 55 to 56 p. c. of near-sighted, nor are there 60 p. c. among persons of the age of students. And though we may concede that insufficient illumination, fine print and fine handwriting, the habit of bending forward, etc., operate injuriously in domestic occupations, also, it must yet be acknowledged that some of these disadvantages at home arise from habits of the school, or at least that the school does not sufficiently oppose the acquiring of these habits, but rather directly favors some of them.

Beside the question of illumination and light of the school-room, Dr. Cohn has principally examined that of the furniture, *i. e.*, desk and seat, and believes himself justified in condemning the present arrangement as positively injurious. This arrangement, he says, compels the pupils to look at print in close proximity, and with their heads bent forward. This requires, on the one hand, a greater activity of the muscles of accommodation in the eye, causing in its part an increase of hydrostatic pressure in the posterior part of the eye-ball and elongation of its axis; and, on the other hand, the bending forward of the head causes obstruction to the flow of blood from the eye, congestion of the eye, and hence, also, increased pressure in the fundus of the eye. Both circumstances together are the cause of the near-sightedness. . . . .

2. *Determination of Blood to the Head.* In the previous section the fact has already been spoken of, that the inclined position of the head causes congestion. . . . . Other conditions

* VI, or IV, respectively, being the lowest, I the highest class. — Ed.

operate in the same direction. In bending the head forward, the trunk naturally is also inclined forward, and the more so, the lower the desk. From this resu'ts a certain compression of the abdomen, with consequent impaired activity of the diaphragm, the most powerful muscle of respiration. But incomplete inspiration opposes the return of blood from the veins of the neck into the chest.

Added to this is the circumstance that during close attention respiration is incompletely performed, the more so, the less the demand for respiration is directly excited by one's own speaking. . . . .

All these circumstances favor what is called *passive* or mechanical congestion, by impeding the return of venous blood. But there is, in school, a very efficient cause also for so-called *active* congestions to the head, *i. e.*, increased flow of arterial blood, and that is the active labor of the brain. . . . .

Among the various affections arising from these partly passive, partly active, congestions, the following three have of late given occasion for statistical researches:

(*a.*) *Headache.* Guillaume (*Hygiène scolaire. Genève*, 1864), who designates it plainly as "*céphalalgie scolaire*," found, among 731 pupils of the Collége municipal in Neufchatel, 296 suffering frequently from headache, — over 40 p. c. Girls were more often afflicted with it than boys, 51 p c. of the former, to 28 p. c. of the latter. . . . . Becker (*Luft und Bewegung zur Gesundheitspflege in den Schulen*, Frankfurt a. M., 1867) examined 3,564 pupils; . . . 974 of them, or 27.3 p. c. suffered more or less from headache. . . . . In the first class of the gymnasium 80.8 p. c. complained of it. Becker concludes from his figures — what is not quite accurate — that the number is smallest in the first school years, and increases with longer attendance, greater number of hours of attendance, and the amount of mental exertion required. As an auxiliary cause he mentions too small rooms.

It is necessary to mention another circumstance for consideration. Deville and Troost found that certain gases, especially carbonic oxide, are capable of passing through red-hot iron, a circumstance not rarely confirmed in school-rooms heated by iron stoves. Headache, dizziness, trembling and similar accidents are the consequences of a slight operation of this so poisonous gas. Dr. Oidtman does not hesitate to assume chronic poisoning by carbonic oxide as comparatively frequent in his part of the country, which is rich in iron stoves.

(*b.*) *Hæmorrhage from the Nose.* Guillaume found it frequent in 21 p. c.; more frequent in boys (22 p. c.) than in girls (20 p. c.) . . . Becker found only 11.3 p. c. subject to epistaxis; accurate details are not given, but he states that the hæmorrhages

are most frequent in the higher classes of the gymnasium, in the girls' high school, and one private school, — in those schools, as he says, the pupils of which sit longest in school, and move about least in the open air.

(*c.*) *Goitre.* [Guillaume calls it *goître scolaire*, the scholars call it "*gros cou*." He found it in 56 p. c.! — 58 p. c. among boys, 64 p. c. in girls. It frequently disappears during vacations, and becomes permanent only at a later date, but is sometimes found in girls of eight years after one year's attendance. Thus far, the data of Guillaume stand alone, and it is doubtful if they are entitled to general acceptance, though it is true that the female sex and youth predispose to goitre, and that dilatation of the cervical vessels engender a disposition to this affection.]

Headache and bleeding from the nose, however, are affections sufficiently well known to physicians, and many parents, as not rarely accompanying attendance at school. The observations before us do not indeed suffice for drawing absolutely certain conclusions, . . . nevertheless, we can but acknowledge, even now, that the school favors, and perhaps often causes, these conditions, and that their frequent occurrence should be a subject of serious consideration.

At this point, the question naturally suggests itself as to the influence of congestive states, such as have been spoken of above, in relation to the mental faculties of the pupils. In fact, it can not be doubted that such conditions are often combined with confusion, incapacity for thought and mental labor, and that, when they become habitual, they may engender dangerous predispositions of the brain. . . . .

3. *Curvatures of the Spine.* Not a few among the physicians who have paid special attention to the school question, and a great number of orthopædists, maintain the opinion that the school bears a large share of the blame in the production of deviations of the spinal column. Especially the lateral curvature, so-called scoliosis, and chiefly the form known as "habitual scoliosis," is here accused. Fahrner says: "Since almost 90 p. c. of these curvatures originate during school years, and the curvature corresponds exactly to the posture in writing, we certainly are justified in accusing the school as the main cause." Guillaume illustrates the comparison of the common form of scoliosis to the writing posture by a drawing, undoubtedly correct in itself, and adds that he found, among 731 pupils, 218 (*i. e.*, almost 30 p. c.) showing a deviation of the spine.

The experiences of orthopædists unanimously agree in that the majority of scolioses originates during the period of obligatory attendance at school. . . . . It can be asserted with safety, that the common scoliosis is a developmental disease of the age of obligatory attendance. It is less certain if the school, as such, be

the chief cause of this disease. On the one hand, comparisons are wanting with such countries and ages where school attendance is not obligatory. The testimony of the Primary School Committee of New York, which Guillaume adduces, has a certain value, but it is not decisive. On the other hand, comparison of many schools would be necessary on this point. . . . . A special consideration against the implication of the school is the great preponderance of scoliosis in the female sex. [Guillaume counts 18 p. c. among boys, and 41 p. c. among girls. This, of course, includes many slight cases. The experience of orthopædists, chiefly on severer cases, is more striking. Klopsch reckons 84–89 p. c. of all scoliotic persons to be in females, etc.] With these figures before us it can not be doubtful that the school is not the only cause of scoliosis; nay, it must be conceded that it is not even the chief cause. . . . .

From consideration of the evils spoken of, even though they are only in part to be ascribed to the school, very definite obligations of the latter may be deduced. On the one hand, the pupils, especially the female pupils, must be appropriately seated and carefully watched in regard to posture and carriage. On the other hand, they must be offered well-timed opportunity by gymnastics to give proper exercise to their limbs.

4. *Affections of the Organs of the Chest.* . . . . Selecting [from the accurate mortuary tables of Berlin] the ages of obligatory school attendance, we meet with a rapid rise of the mortality from pulmonary and laryngeal phthisis in the ages of from 10 to 15 years, which began in the preceding period of from 5 to 10 years of age, and is considerably augmented still in the later period of from 15 to 20.

		Pulm. Phthisis.	Consumption.
There occur, at the age of	5—10 years,	4.81	8.93
" "	10—15 "	12.96	7.90
" "	15—20 "	31.88	4.74 per cent.

of the deaths, from all causes, without considering scrofula and many other nearly related categories. This result is certainly very remarkable, especially when we consider that, in persons of these ages, only typhoid fever and cholera afford mortality figures at all approaching the above.

This mortality, it is true, can not be ascribed to attendance at school alone; . . . nevertheless, the fact must not be underrated. Circumstances of moment indicate that the school contributes much towards it. The following influences, more especially, may be counted as injurious: (1) the vicious air, rendered so by the presence of many children; (2) frequent "colds," caused by the change from the hot school-room to the free and cool air outside, by draughts from windows and doors, etc., whereby inflammations of the throat and chest are produced in great number;

(3) the dust of the school-rooms; (4) the fact that the respiratory movements are impaired by the long-continued sitting.

[The author here mentions that from recent investigations we are no longer able to identify phthisis with tuberculosis, but that the former is due to a variety of processes, all of which finally produce ulcerations of the lungs.] The majority of these begin with simple catarrhal and inflammatory processes, which owe their origin to external agents, especially cold and the inhalation of irritating substances (dust, carbon, etc.) Their continuation is favored by low, respiratory movements, which effect accumulations and retention of excretory matters; furthermore, by the viscidity and perishable nature of these excretory substances, which are decomposed and inspissated, and on the character of which the nature of the inspired air has no less, perhaps even more, influence than the quality of the food; finally, by the continuation or repetition of the irritations.

This brief synopsis will suffice to show how dangerous may be a school with defective arrangements and inefficient superintendence, and how much reason there is to fear that a part of the fatal results of phthisis in the school ages may really be attributed to the school as such, and that in part even the unfavorable termination taking place after school life may be laid to the school period.

5. *Affections of the Abdominal Viscera.*
6. *Contagious Diseases.*
7. *Injuries.*

[We pass over these sections for want of space, because they are of less importance, and no accurate statistical data are adduced. The author finally enumerates the following known injurious agencies and causes of disease pertaining to schools, to which attention should be directed:]

(1.) *The air in the school-room*, the quality of which is determined by the size of the room, the number of pupils, the mode of heating, the ventilation, moisture of the floor and walls, dust (cleanliness).

(2.) *The light*, as determined by the situation of the building and room, the size of the windows and their relation to the desks, the color of the walls and surroundings, artificial light (gas, oil).

(3.) *The sitting* in the school-room, especially the relations of desk and seat, size of the seats, their arrangement, duration of sitting.

(4.) *Bodily exercise*, especially playing, gymnastics, swimming, their relations to sitting and to the purely mental labor, their arrangements and superintendence.

(5.) *Mental exertion*, its duration and variety, the individual amount, the arrangement and duration of recesses and vacations, the extent of home and school exercises, the date of commencement of obligatory attendance, etc.

(6.) The *punishments*, especially corporeal.
(7.) The *water for drinking.*
(8.) The *privies.*
(9.) The *means* (implements) *of instruction*, especially the choice of school books (size of type), and objects of illustration.—*St. Louis Med. and Surg. Journal.*

OZÆNA is said to have been cured (three cases) by irrigations of the part with solution of permanganate of potash, 5 parts to 100 of water.

SYCOSIS is successfully treated by Mr. Stewart with a saturated solution of nitrate of potash, applied three or four times a day. If it produces too much pain it may be diluted.

PHAGEDENIC CHANCRES were arrested in two cases, by Prof. Schwanda, by passing through them the constant electrical current.

DIPHTHERIA was treated by the late Dr. Magruder, of Washington, as it is claimed, with most marked success, on the following plan:

The throat was rubbed frequently, externally, as soon as the swelling and soreness commenced, with spirits of turpentine. Internally, this:

℞. Potassæ chlorat., - - - - - ʒj;
Tinct. guaiaci comp., - - - - - ʒij;
Tinct. cinchonæ, - - - - - ʒij;
Mellis. - - - - - - - ʒss;
Aq., - - - - - - - ʒijss;

M. — S. A tablespoonful every three hours. Twenty drops of the muriated tinct. of iron, an hour and a half after each dose.

It is said that 82 out of 85 cases were successfully treated.

TOOTHACHE finds another remedy in a paste made of nitric ether and sulphate of alumina, and applied to the cavity. The most violent odontalgia is promptly relieved, with no chance of injury, and after several applications the aching part is thoroughly anæsthetized.

COMMON CATARRH is treated by Dr. Scudder, thus:

℞. Tinct. verat., - - - - - ʒss;
Tinct. gelsemini, - - - - - - ʒj;
Aq., - - - - - - - ʒiv;

M. — S. A teaspoonful every one or two hours.

THE same gentleman treats NEURALGIA in feeble persons, or where there is a feeble circulation, with the following, used alternately:

℞. Tinct. aconit. rad., - - - - gtt x;
Tinct. belladonnæ, - - - - - gtt xx;
Aq., - - - - - - - ℥ iv;
M.
℞. Tinct. nucis vomic., - - - - ℥ j;
Aq., - - - - - - - ℥ iv;
M.—S. A teaspoonful every one or two hours.

As prophylactic in CROUP, he commends a liniment:

℞. Ol. stillingiæ, - - - - -
Ol. cajeput., - - - - - aa ℥ ij;
Ol. lobeliæ, - - - - - - ℥ j;
Alcohol, 76° - - - - - - ℥ ij;
M.—Direct the mother to rub it on the throat when symptoms are manifested; and if necessary, give a drop on a lump of sugar.

Pertussis. (Valentine Mott).

℞. Acid hydrocyan., - - - - - gtt. vj;
Ext. belladonnæ, - - - - - gr. ij;
Tr. opi., camph., - - - - -
Aq. pur., - - - - - aa ℥ iij;
Syrup. tolutani, - - - - ℥ j;
M.—S. A teaspoonful four times a day.

Sore Nipples. (J. G. Wilson).

℞. Plumbi nitratis, - - - - gr. x;
Glycerin., - - - - - ℥ j;
M.—Ft. solut.
S.—Apply freely to the excoriated part.

Trismus Nascentium.

DR. T. L. PAPIN (*Humboldt Med. Archives*), treated a case thus:

℞. Chloroform, - - - - - *m* xij;
Sp. æth. sulph., - - - - - *m* xv;
Sodæ bicarb., - - - - - gr. xij;
Syrup. zingiber, - - - - -
Aq. flor. aurant., - - - - aa ℥ iv;
M.—S. A teaspoonful p. r. n. to allay spasmodic action and secure rest and quiet.

The paroxysms after a while recurring, he resorted to the local application of chloroform to the spine, a small strip of cotton cloth wetted and applied to the entire length. This application,

alternated with emollients when vesication occurred, occasional inhalations and mild purgatives was continued *fifteen* days, when the cure was complete.

Dr. Boisliniere cured a similar case, several years since, administering the chloroform by enema.

Dr. Leihlbach admires the use of carbolic acid, exceedingly. In Impetigo, he uses this ointment:

℞. Acid. carbol. crystal., - - - - ℥j;
Sodæ sulphit., - - - - - - ʒss;
Glycerin, - - - - - - - ʒjss;
Cerat. simp., - - - - - - - ℥ij;

M. — S. Apply three times a day.

In Scabies, he uses:

℞. Ac. carbol. cryst., - - - - - ʒjss;
Flor. sulphur., - - - - - - ʒss;
Sodæ sulphit., - - - - - - ʒss;
Glycerin, - - - - - - - ʒij;
Cerat. simp, - - - - - - ℥ij;

M. — S. Take a bath or wash all over, morning and night, and then anoint thoroughly wherever the disease extends.

The acari are generally killed in three days.

In the Diarrhœa of Children, he thinks it is particularly useful in arresting fermentation, etc. For a child from a year to eighteen months of age, he prescribes:

℞. Pepsin, - - - - - - - ʒss—ʒj;
Bismuthi subnit., - - - - - - ʒss;
Pulv. opi., - - - - - - - gr. 1-5—1-2;
Acid. carbol. c., - - - - - - - gr. 1-8—1-2;
Quiniæ sulph., - - - - - - gr. j—ij;

M. — In chart. x divid.

S. — One every two or four hours. In some cases he substitutes bromid. potassii for the opium.

Primitive Chancres, whether soft or indurated, are treated by M. Champouillon with powdered camphor. Cicatrization takes place in ten or twelve days in ordinary cases. He thinks bubos less likely to occur. The powder is applied twice a day, taking care *not* to remove the paste formed on the surface oftener than once in two or three days.

Which reminds us that we have seen cases, where *finely pulverized loaf sugar* used in the same way, seemed to accelerate the cure remarkably.

In a case of Hæmoptysis, when local irritation was desired, Dr. Bemiss used this liniment:

℞. Hydrarg. bichlorid., - - - - . gr. ij;
Tinct. iodinii, - - - - - ʒ iv;
Glycerin., - - - - - -
Aq., - - - - - - aa ℥ ij:

M. — Moisten lint or cotton with this and apply p. r. n.

Phthisis is treated by Surgeon Sanger (*Lond. Lancet, Sept.*, 1869), with arsenic. He uses the liquor arsenicalis or solution of arsenite of soda in five minim doses, twice a day, combined with a drachm of the citrate of iron wine, or five grains of the citrate of iron and quinine. He exhibits it after eating, and orders it suspended if gastric irritation occurs. In some cases, where iron cannot be borne, he combines each dose with 15 or 20 grains of hyposulphite of soda.

A better plan is to give the Fowler's solution in regularly diminishing doses, and be guided by the influence on nutrition.

Varicose Ulcers.

Several cases are reported in the *Medical Gazette*, cured by Prof. Stephen Smith's method. Dr. Osborn, the reporter, finds it highly satisfactory. It is simple and safe.

"A bandage is tightly drawn around the leg, immediately below the knee, with a compress over both or either of the large veins involved. The patient is requested to throw his weight on the limb to be operated on, and when the vein becomes sufficiently distended, with a hypodermic syringe, having a sharp point, well oiled, inject into the veins below the compress, 3 or 4 minims of liquor ferri persulphatis; withdraw it immediately, placing the finger over the point of puncture, then cover it carefully with adhesive strips (icthyocoll). A fine clot will form from the compress down half an inch to an inch. All air must be forced out of the syringe before throwing in the injection. The compress may be loosened a few hours after the operation, and in a few days it may be removed entirely. The patient is enjoined to rest in a recumbent position for a few days."

This is a very easy and ordinarily safe method of treating these, frequently very troublesome sores, as well as for avoiding danger of rupture of the distended veins.

Drowning.

Dr. Benjamin Howard, of New York, has devised the following method for the restoration from drowning, which seems preferable, in some respects, to the plans usually resorted to, and is well worthy of having its merits tested by careful trial of it:

1. Unless in danger of freezing, never move the patient from the spot where first rescued, nor allow bystanders to screen off the fresh air, but instantly wipe clean the mouth and nostrils, rip and remove all clothing to a little below the waist, rapidly rub dry the exposed part, and give two quick smarting slaps on the stomach with your open hand.

If this does not succeed immediately, proceed according to the following rules to perform artificial breathing:

2. Turn the patient on his face, a large bundle of tightly rolled clothing being placed beneath his stomach, and press heavily over it upon the spine for half a minute.

3. Turn the patient quickly again on his back, the roll of clothing being so placed beneath it as to make the short ribs bulge prominently forward, and raise them a little higher than the level of the mouth. Let some bystander hold the tip of the tongue out of one corner of the mouth with a dry handkerchief, and hold both hands of the patient together, the arms being stretched forcibly back above the head.

4. Kneel astride the patient's hips, and with your hands resting on his stomach, spread out your fingers so that you can grasp the waist about the short ribs. Now, throw all your weight steadily forward upon your hands, while you at the same time squeeze the ribs deeply, as if you wished to force every thing in the chest upwards out of the mouth. Continue this while you can slowly count — one — two — three; then suddenly let go, with a final push, which springs you back to your first kneeling position. Remain erect upon your knees while you can count — one — two; then throw your weight forward again, as before, repeating the entire motions — at first, about four or five times a minute, increasing the rate gradually to about fifteen times a minute, and continuing with the same regularity of time and motion as is observed in the natural breathing which you are imitating.

5. Continue this treatment, though apparently unsuccessful, for two hours, until the patient begins to breathe; and for a while after this help him, by well-timed pressure, to deepen his first gasps into full, deep breaths; while the friction of the limbs, which should, if possible, have been kept up during the entire process, is now further increased.

6. After-treatment — externally: As soon as the breathing has become perfectly natural, strip the patient rapidly and completely. Enwrap him in blankets only. Put him in bed in a room comfortably warm, but with a free circulation of fresh air, and except for the administration of internal treatment, let him have perfect rest.

Internally: Give a little hot brandy and water, or other stimulant at hand, every ten or fifteen minutes for the first hour, and as often thereafter as may seem expedient.

Cutaneous Affection Caused by the Use of Bromide of Potassium.

BROMIDE OF POTASSIUM has been so largely employed of late years in the treatment of a great variety of diseases, that it is well to bear in mind that it may itself induce certain cutaneous affections, and these have been particularly noted by M. Voison. He enumerates no less than five, namely:

1. An eruption resembling acne, affecting principally the face and chest, accompanied by more or less itching, and rarely with fever. This may occur when not more than a drachm has been ingested.

2. Amongst ninety-six epileptics treated with bromide of potassium, there occurred, six times, large, elongated, rose or cherry-red swellings, half an inch or more in diameter, on the surface of which collections of pustules, also resembling acne, were developed. The swellings occurred invariably on the lower extremities, and were extremely painful. They healed very slowly, thick crusts forming, leaving indelible yellow spots, covered with scales.

3. On two occasions an exanthematous eruption, resembling erythema nodosum, appeared, though unaccompanied by any febrile symptoms, which lasted for more than six months.

4. Very troublesome furunculosis, or succession of boils with carbuncles on the neck.

5. In one instance an eczematous eruption appeared on the legs, which lasted for a year, and was accompanied by profuse secretion. In this instance, also, the greater part of the head was affected with pityriasis.

The treatment recommended by M. Voisin, as generally applicable for these cutaneous affections, consists in the administration of alkaline drinks and baths, sudorifics, local emollients, etc. — *Practitioner, Oct.*, 1869, *from Centralblatt.*

Therapeutic.

MR. EDITOR. — I would like to ask, in your journal, for the remedy *warranted* to cure a case of leucorrhœa, in a young girl, aged 15; well developed physically — menses well established — free and regular — health apparently good, but continually troubled with a discharge, staining the linens yellow; perhaps patient rather scrofulous, inclined to increased secretions from mucous surfaces. J. L. W.

We never *warrant* our patients any thing, except that we will do our best. For the case, as it stands, we would suggest Sep., and recommend a "voyage of discovery." Doctor, are there no concomitant symptoms? Look for a cause. A case somewhat similar was caused by a *spool of thread!* — *Med. Investigator.*

External Use of Digitalis as a Diuretic.

Dr. Brown has succeeded in re-establishing the renal function in six cases of calculus of the kidney, when all other measures had been tried without effect, by the external use of digitalis in the form of poultices made either by throwing the fresh leaves into boiling water, or by incorporating the concentrated tincture with linseed meal. A rapid fall of the pulse follows the application. The cataplasms made with the leaves are especially to be recommended, and they should be renewed every six hours till the lowering of the pulse warns us to desist. — *Dublin Quart. Journal Med. Sci., August*, 1869, *from Rev. de Thér., Dec.*, 1868.

Which reminds us of old-time usages. Here are a couple of ancient prescriptions for the production of diuresis:

℞ Tinct. Digital., Tinct. Scillæ, - - - - -
Linim. Sapon. and Opi., - - - - aa ℥ ij;
Aq. Ammon., Ol. Camph, - - - aa ℥ ss;
Tinct. Cantharid. Fort., - - - - ℥ ij;

M. — S. To be rubbed in freely, over the surface, three times a day.

℞ Liniment. Volatil., - - - - - partes ij;
Tinct. Cantharid., Tinct. Digital., - -
Tinct. Colchici, Tinct. Iodin., - - - aa p. j;

M. — S. Apply over half the body, three times a day.

Management of After-pains.

Prof. T. Gaillard Thomas, M.D., in a "Lecture on the Management of Woman after Parturition," gives us the following timely hints:

The less firmly a uterus contracts, the more severe are the after-pains, for firm contraction expels these clots, and thus the cause of the painful contraction disappears. For this reason, after first labors, they do not occur. To cause firm uterine contraction, administer a full dose of ergot, just after, or during the stage, in every case. Ergot never does harm, but fulfills an indication of great importance, and guards against the liability of hæmorrhage. Should this means fail, let the opiate be given before the obstetrician leaves the house. An excellent combination, which he habitually employs for this purpose, is the following:

℞ Chloroformi (Squibbs), - - - - ℥ ijss;
Morphiæ Sulph., - - - - - - gr. ijss;
Syrupi, - - - - - - ℥ ij;

M. — A teaspoonful every hour till relieved. — *Rich. and Lou. Med. Jour.*